WORKSHOP SAFETY PRACTICE

1. What is the type of mechanical hazards in workshop?
   A. Sickness B. Currentleakage
   C. Un guardedmachinery D. Wrong layout ofmachinery
2. Which type of workshop equipment used to deliver the air pressure to hydraulichoist?
   A. Jibcrane B. Compressor
   C. Vacuum pump D. Hydraulic pump
3. What is the name of risk symbol?

A. Risk of fire B. Risk of wind
C. Risk of slippage D. Risk of hazard
4. Which type of personal protective equipment used to protect eye?
   A. Cap B. Mask C. Gloves D. Goggles
5. Which type of protective equipment used to protect head?
   A. Boot B. Mask C. Apron D. Helmet
6. Which part of the human body need to protect in high noise level at workplace?
   A. Ear B. Eye C. Nose D. Head
7. Which personal protective equipment protectthedust?
A. Mask B. Apron C. Gloves D.Faceshield
8. Whichis explosivehazard?
   A. Physical hazard B. Chemicalhazard
   C. Biologicalhazard D. Mechanicalhazard
9. Which is to be checked before use the tool?
A.Tools material name B. Tools damage or worn
C.Tools manufacture name D. Tools manufacturing year
10. Which type of oil used in the lifts and cranes?
A .Gingelly oil B .Coconut oil C. Hydraulic oil D. Ground nut oil
11. Which type personal protective equipment is recommended for use, to handle loads with rough surfaces and jaggededges?
   A. Paper gloves B. Rubber gloves C. Leathergloves D. Polythenegloves
12. Which type of gloves used to avoid cuts and abrasion during materialhandling?
   A. Rubber gloves B. Leather gloves C. Cottongloves D. Polythene thin gloves
13. What is the name of the prohibitionsign?

   A. One wayprohibited B.Pedestriansprohibited
   C. Do not extinguish withwater D.Smoking and naked flamesprohibited
14. Whichtypesofsafetyinvolveswearingof safetyshoesandgoggleinaworkshop?
   A. Generalsafety B. Personalsafety
   C. Machinesafety D. Generalandmachinesafety
15. Which is the cause for lifting equipment failure?
A. Oil change B. Under load C. Oil sealleak D. Check oil level
16. Which equipment is used in vehicle service station to lift the vehicle for waterwash?
   A. Hoist B. Crane C. Stand D. Screwjack
17. Which equipment is to support under lifting vehicle before working underneath the vehicle for safework?
   A. Stand B. Slings chain C. Lifting crane D. Hydraulicjack
18.Which oil is harmful to theenvironment?
   A. Engineoil B. HydraulicoilC. Seeds/nutsoil D. Used engineoil
19.Which area is restricted tosmoking?
A .Water filling area B.Fuel refilling area C. Gram marketarea D. Corporation limit area
20. Which is the cause for fire while refuelling the hot engine?

A. Vapour B. Paper C. Cloth D. Leather

21. Which type of fuel contains more carbon monoxide?
A. Solid fuel B. Burnt fuel C. LiquidfuelD. Unburnt fuel

22. Which automobile components produces dust?
A. Axle B. Piston C. Gear box D. Brake shoe

23. Which type of material toxic may cause for lungcancer?
A. Fiber B. WoodC. Graphite D. Asbestos

24. Which device is best for control toxicwaste?
A. WirebrushB. CottonwasteC. Aircompressor D. Vacuumcleaner

25. Which comes under firstaid?
A. Treating a victim for a shock B. Completing a primarysource
C. Assessing a victim's vitalsigns D. Immediate care and support given toinjured person

26. Which part of body, if bleeding profusely is considered serious and need professional attention?
A. Leg B. Knee C. WristD. Buttock

27. What is your immediate action on completion of firstaid?
A. Calltaxi B. Call yourfriend C. Call fireservice D. Call emergencyservice

28. What is ABC in firstaid?
A. Army, Branch,Calculate B. Aviation, Breathing,Cumin
C. Away, Breathing,Calculation D. Airway, Breathing,Circulation

29. Which is the three elements must be presentforburningofanyfire?
A. Fuel + Heat + Oxygen B. Oxygen+Fuel+Paper
C. Heat + Water + Oxygen D. Smoke + Fuel + Oxygen

30. What is called the isolating the fire from the supply of oxygen by blanketing with foam andsand?
A. Cooling B. Starting C. Misfiring D. Smothering

31. What is the cause for electricfire?
A. RatedfusesB.Under loaded circuitC.Over loaded circuits D.Tight wireconnection

32. Which is highly flammableliquid?
A. LPG B. Water C. DieselD. Crudeoil

33. What is the type of fire with wood, cloth, and paper?
A. Class - A B.Class - B C. Class - C D. Class -D

34. Which should not be used on burning liquids?
A. Co_2 B. Foam C. SandD. Water

35. What is the class of gas burningfire?
A. Class - A B. Class – B C. Class - C D. Class -D

36. Which type of fire extinguisher unsuitable for electricfire?
A. CO_2 B. CTC C. Foam D. Drypowder

37. Which item is to be prevent class 'B'fire?
A. CO_2 B. Argon C. Oxygen D. Nitrogen

38. Which class of fire comes under flammable liquids?
A. Class - A B. Class - B C. Class –CD.Class-D

39. Which type of fire extinguisher suitable for class 'A'fire?
A. Halon B. Drypowder C. Foam orwaterD. Carbon-di-oxide

40. How to care burn hand victim?
A. Blow hot air to the burnt hand B. Blow cool air to the burnthand
C. Covered water to the burnthand D. Covered hot water to the burnthand

41. Which fire extinguisher suitable for class "C" fire?
A. Foam filledextinguisher B. Water filledextinguisher
C. Dry powder fireextinguisher D. Carbon-di-oxide fireextinguisher

42. Which safety involves wearing of gloves and helmet in aworkshop?
A. General safety B. Personal safety
C. Machinesafety D. General and machinesafety

43. Whichtypeof safety states"Don'tspillthe fuelonworkplace"?

A. General safety B. Personal safety
C. Machine safety D. Generalandmachinesafety

44.Which is the major energy conservation opportunity?
A. Stopping ofleakage B. Replacementmachineries
C. Replacement of house holdappliance D. Laps in housekeeping

45. An accident is……
A. unplanned event B. non-controlled event C. undesirable event D. all of the above

46. Which one of the following is not the cost due to an accident?
A. Cost due to damage to machine, tools, material and property B. Cost of lost time of the injured person
C. Cost of compensation and medical aid D. Cost due to increase in production

47. The safe way of working is……..
A. an effective and right way of working B. an ancient way of working
C. a way of handling the work in a hurry D. a way of normal working

48. The best way of avoiding accident is by…….
A. doing work in ancient way B. doing work in one's own way
C. observing safety rules related to job, machine and workplace D. using safety equipment

49. In case of an accident, the victim should immediately be……
A. asked to take rest B. enquired about the accident
C. attended to immediately D. left to himself without treatment

50. An oily floor should be cleaned by……..
A. cotton waste B. putting water C. putting saw dust D. spraying carbon dioxide or sand

51. Fire is a combination of……..
A. fuel, light and oxygen B. fuel, heat and oxygen
C. fuel, heat and carbon dioxide D. fuel, light and nitrogen

52. In case of arc welding, one should protect his eyes by using……..
A. dark glass screen B. sun goggles C. mask D. clear glasses

53. While grinding one must use……..
A. dark glass screen B. mask C. safety goggles D. sun goggles

54. A hammer with loosely fitted handle will……..
A. fly away and cause accident B. absorb shock C. have easy swing D. convey more leverage

55.. Accidents are caused , do not happen.Which one of the following is not due to human failure?
A. Train accidents due to signal failure B.Driving the vehicle in drunked state
C. Accidents during due to earth quake D. Crossing the unmanned rail crossing without looking both sides

56 . Which one of the following is dangerous while crossing the road?
A. Crossing the road while red signal is on B. Crossing on zebra line
C. crossing when green signal is on D. crossing when traffic police allows to cross

57. In case of electric fire, which one of the following should not use?
A. put water on it B. Use sand or clay C. Use C.T.C. extinguisher D. Use dry chemical powder

58. Which is the cause of electric fire?
A. Loose connection B. over loading the wires C. Electric short circuit D. All the above

59. Oil fir extinguished by…….
A. putting water on it B. foam extinguisher C. Soda acid extinguisher D. none of the above

60. Carbon atious fire is caused due to burning of wood or coal, to put off this fire use…….
A. Soda acid extinguisher B. Sand or clay C. Water D. All the Above

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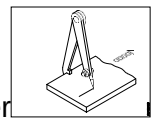
ANSWERS: **WORKSHOP SAFETY PRACTICE**

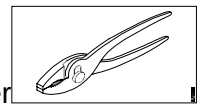
1.C	2.B	3.A	4.D	5.D	6.A	7.A	8.B	9.B	10.C	11.C	12.B	13.D	14.B	15.C
16.A	17.A	18.D	19.B	20.A	21.D	22.D	23.D	24.D	25.D	26.C	27.D	28.D	29.A	30.D
31.C	32.A	33.A	34.D	35.C	36.C	37.A	38.B	39.C	40.C	41.C	42.B	43.A	44.B	45.D
46.D	47.A	48.C	49.C	50.C	51.B	52.A	53.C	54.A	55.C	56.A	57.A	58.D	59.B	60.D

HAND AND POWER TOOLS

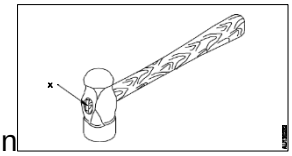
1. Which hand tool used for circular cut in sheet metal work?
A. Straight snip B. Bend snip C. Combination plier D. Side cutting plier
2. Which spanner used for zero setting in outside micrometer?
A. Hooks spanner B. Ring spanner C. Double end spanner D. Adjustable spanner
3.What is the name of caliper?



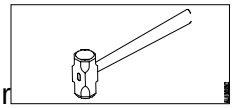
A Outside calliper B. Firm joint calliper C .Spring joint calliper D. Heal type jenny calliper
4.What is the name of plier?



A. Flat nose plier B. Round nose plier C.Slip joint plier D. Internal circle plier
5.What is the name of part marked as'x'?

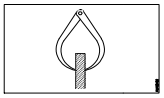


A. Face B. Cheek C. Wedge D. Peen
6. What is the name ofhammer?

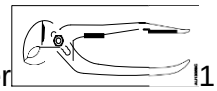


A. Club hammer B. Ball peenhammer C. Cross peen hammer D. Straight peenhammer
7. What is the name ofcaliper?

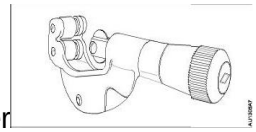
A. Firm joint calliper B. Spring joint calliper C. Out side calliper D. Inside calliper
8.What is the name ofcaliper?



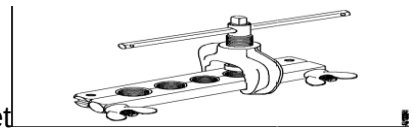
A. Jennycaliper B. Spring jointcaliper C. Outsidecaliper D. Inside caliper
9. What is the name ofplier?



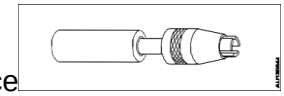
A. Flat noseplier B. Round noseplier C. Slip joint multi gripplier D. Internal circleplier1
10. What is the name of tool?



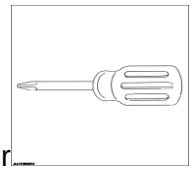
A. Curve cutter B. Circle cutter C. Pipe cutter D. Thread cutter
11. What is the name oftool?



A. Crimping tool B. Flaring tool C. Wrench D. Ratchet
12. What is the name of the vice.

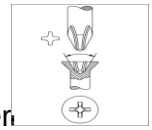


A. Pipe viceB. Hand vice C. Pin vice D. Tool maker's vice
13. What is the name of the screwdriver?



A. Ratchet screwdriver B. Offset screw driver C. Stumpy screwdriver
D. Cross-Recess (Phillips)screw driver

14. What is the name of screwdriver?



A. Cross - recess screwdriver B. Ratchet screwdriver C. Stumpy screw driver
D. Offset screwdriver

15. What isflaring?
A. Increasing the diameter of a tubeend B. Decreasing the diameter of atube
C. Increasing the length of atube D. decreasing the length of a tube

16. Which plier used for bending narrow stripsof thin metalsheet?
A. Flat noseplier B. Round noseplier C. Slip jointplier D. Internal clipplier

17. Which type of socket spanner can beturned to anangle?
A. Socketspanner B. Deep socketspanner C. Spark plug socket spanner D. Swivel socketspanner

18. Which tool used to tighten the nuts and bolts at recommended tightness?
A. Studwrench B. Pipewrench C. Torquewrench D. Adjustable wrench

19. What is the use of ball peen hammer head?
A. Strike softmetalB.Strike themetalC.Stamp thespecificationsD.Spread the metal In alldirection

20. Which metal tube is used for single thickness flare?
A. Brass B. Bronze C. Aluminium D. Copper

21. How the hammers arespecified?
A. Weight andshape B. Size and shape C. Metal and shape D. Metal andweight

22. Which type of chisel used to removeexcess metal from weldedjoint?
A. Cross cut chisel B. Half round chisel C. Flatchisel D. Diamond pointchisel

23. Which instrument is used to check the right angle?
A. Steelrule B. Trysquare C. Firm jointcaliper D. Spring Jointcaliper

24. Which is used for marking and setting of work?
A. Surface plate B. Marking table C. 'V'Block D. Bench vice

25. What is the purpose of angleplate?
A. Machining B. Marking C. Polishing D. Grinding

26. What is the purpose of half roundchisel?
A. Cut excessmetal B. Cut curvedgrooves C. Squaring metal atcorners D. Cutkeyways

27. Which screw driver is used in blindspace?
A. Ratchet screw driver B. Offset screw driver C. Philips screw driver D. Stumpy screwdriver

28. What is the purpose of the cross peen in the hammer?
A. Fix the handle B. Strike themetal C. Strike the metal in alldirection D. spread the metal in onedirection

29. Which refers the size of hexagonal Allen key?
A. Size of the radius B. Size of the diagonal C. Size of the diameter D. Size across theflat

30. How the screw driver isspecified?
A. Length of blade and width of tip B. Width and diameter of the edge
C. Thickness andlengthD. Shape and length

31. The jaws in this type of wrench open parallel with the help of a screw thus providing suitable for all sizes of nuts. These are…….
A. Pipe wrenches B. Monkey wrenches C. Socket wrenches D. Allen wrenches

32. Which one of the following types of hammers is used for forming a rivet head by spreading the shank of the rivet?
A. Ball peen hammer B. Cross peen hammer C. Straight peen hammer D.Soft hammer

33. The length of the hammer handle for a 500 g hammer should be about……..
A. 275 mm B. 300 mm C.325 mm D. 350 mm

34. Generally the length of the handle of a vice is
A. 1.5 times the nominal size of the vice B. 2.5 times the nominal size of the vice
C. 3.5 times the nominal size of the vice D. 4.5 times the nominal size of the vice

35. For general purpose, a bench vice is fixed at a height of……..
A. 80 cm B. 90 cm C. 106 cm D. 125 cm

36. Vice clamps are used to……
A. protect the finished surfaces of the job B. hold the job firmly
C. protect the serrated jaws of the vice D. protect the file

37. The movable jaw of a bench vice is not moving even though the spindle is turned. It is due to the

reason that….

A. fixed and movable jaws are over tight B. spindle pin is broken

C. spring is not functioning D. threads on spindle are slightly worn out

38. The peen of a cross-peen hammer is…….

A. angular to the handle B. straight to the handle C. cross to the handle D. bent towards the handle

39. The peen of a straight peen-hammer is……..

A. angular to the handle B. straight to the handle C. cross to the handle D. bent towards the handle

40. The bench vice is called as parallel jaw vice because……..

A. it can hold the jobs having parallel sides B. it is fixed parallel to the shop floor

C. its width of jaws are parallel D. its movable jaw moves parallel to the fixed jaw

41. The box nut of a bench vice is made of…….

A. mild steel B. phosphorous bronze C. white metal D. alloy steel

42. The jaw plates of a bench vice are made of…….

A. tool steel B. mild steel C. cast iron D. bronze

43. The pin vice is used for……

A. holding odd-shaped small workpieces B. fixing the pins C. holding the pins D. holding the studs

44. The hand vice is used for……

A. fixing heavy jobs B. tightening nuts and bolts C. holding round jobs D. doing minute work

45. The bench vice spindle is made of……

A. Mild steel B. Cast iron C. Tool steel D. Bronze

46. Eye hole of hammer is……

A. StraightB. Tapered at handle end C. Tapered from both ends D. Tapered from front end

47. Handle of hammer is made of……..

A. Hard wood B. Soft wood C. Elastic wood or bamboo D. Plastic

48. The height of the vice top should be……

A. 5 cm to 8 cm below the elbow height of the operator

B. 5 cm to 8 cm above the elbow height of the operator

C. Just at elbow label

D. None of the above

49. Which is the function of a pipe vice?

A. grips the work at four point B. The screw is vertical

C. The movable jaw moves vertically D. All the above

50 . Usually the width of hand vice jaw is…….

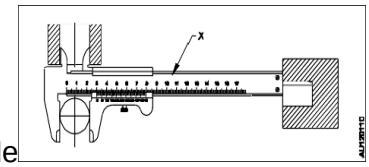
A. 95 to 180mm B. 40 to 45 mm C. 80 to 140 mm D. 125 to 150 mm

ANSWER: **HAND AND POWER TOOLS**

1.B	2.A	3.D	4.C	5.C	6.A	7.D	8.C	9.C	10.C	11.B	12.C	13.C	14.A	15.A
16.A	17.D	18.C	19.D	20.D	21.A	22.C	23.B	24.C	25.B	26.B	27.B	28.D	29.D	30.A
31.B	32.A	33.B	34.B	35.C	36.A	37.B	38.C	39.B	40.D	41.B	42.A	43.C	44.D	45.A
46.C	47.C	48.A	49.D	50.B										

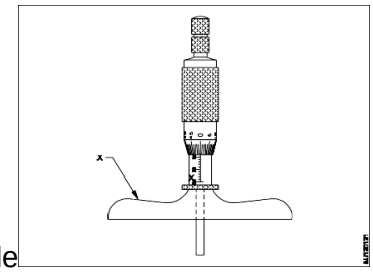
SYSTEM OF MEASUREMENTS

1. Which gauge is used to check the inflationof tyre?
   A. Wiregauge B. Feelergauge C. Vacuumgauge D. Pressuregauge
2. What is the smallest reading of vernier caliper?
   A. Deviation B. Tolerance C. Least countD. Allowance
3. Which one is the indirect measuring instrument?
   A. Steelrule B. Inside caliper C. Inside micrometer D. Outsidemicrometer
4. What is the name of part marked as 'X'?



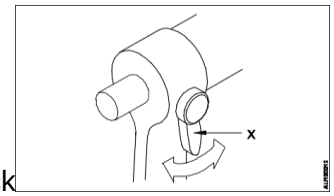
A. Beam B. Fixedjaw C. Vernierscale D. Depth measuring blade

5. What is the name of the part marked as'X'?



A. Cap B. Lock C. Stock D. Thimble

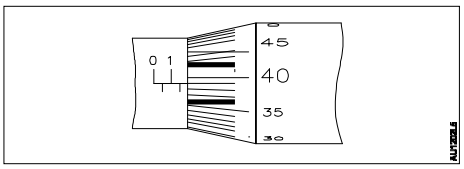
6.What is the name of the part marked as'x'?



A. Anvil B. Spindle C. Thimble D. Spindle lock

7. What is the name of beveled graduated sleeve of outside micrometer?
   A. Anvil B. Barrel C. Spindle D. Thimble
8. Which part of engine can be measured by dialgauge?
A. Crank pin B. Gudgeonpin C. Piston D. Cylinderbore
9. What is the working principle of dial test indicator?
   A. Leveragemotion B. Springmotion
   C. Linear motion into reciprocating motion D. Linear motion into rotarymotion
10.Which instrument is used to check the run- out of crankshaftjournals?
   A. Telescopic gauge B. Dial test indicator C. Bore dial gauge D. Verniergauge
11.Which gauge used to check the spark plug gap?
A.TelescopicgaugeB.VerniergaugeC.Pitch gaugeD.Feelergauge
12. Which instrument used to check the piston ring endgap?
   A. Feeler gauge B. Vernier gaugeC. PitchgaugeD. Telescopicgauge
13. What are the two instruments used to measure the warpage of the flywheel?
   A. Knife, woodenblank B. Steel rule, metalshim C. Wooden plank, metalshim D. Straight edge, feelergauge
14. Which precision instrument used for taking external, internal and depthmeasurement?
   A. Verniercaliper. B. Depth micrometer C. Inside micrometer D. Outsidemicrometer
15. What is the use of ratchet stop in outside micrometer?
   A. Prevent load B. Preventspeed C. Prevent excessivepressure D. Preventsliding
16. What is the reading of outside micrometer (0.25mm)?

A.1.59mm B. 1.89mm C. 1.91mm D. 2.41mm



17.What is the distance covered by the spindle in one full rotation of thimble in outside micrometer?
A. 2mm B. 1.5mm C. 1.0mm D. 0.5mm

18.Which measuring gauge needs to be set up to a fixed dimension beforeuse?
A. Depth gauge B. Dial testindicator C. Dial boregauge D. Vernier dialgauge

19.Which gauge used to check leakage of inlet minified?
A. Feelergauge B. Vacuum gauge C. Pressure gauge D. Emissiongauge

20. Steel rule is a…….
A. marking instrument B. precision instrument C. checking instrument D. direct reading measuring instrument

21. What is determined while measuring a component?
A. Nominal sizeB. Actual size C. Specified size D. Scale size

22. Steel rule is made of…….
A. Brass B. Zinc C. Stainless steel D. Cast iron

23. Which of the following instruments is used for checking flatness and squareness of a surface?
A. Try squareB. Vernier height gauge C. Slip gauge D. Bevel gauge

24. Which of the following is an indirect measuring tool?
A. Inside caliperB. Vernier caliper C. Universal bevel protractor D. Inside micrometer

25. The base unit of length as per S. I. units is
A. inch B. foot C.centimetre D. metre

26. Which is NOT the use of a try square?
A. Measuring right angleB. Checking squareness
C. Marking straight lines at 900 against an edge D. Setting work piece at 900

27. Which of the following is a direct measuring tool?
A. Try square B. Steel rule C. Straight edge D. Ring gauge

28. The minimum measurement that can be read with the help of a steel rule is……
A. 0.01 mm B. 0.02 mm C. 0.05 mm D. 0.50 mm

29. Try square is used to check up an angle of…….
A. 30° B.45° C. 60° D.90°

30. In a metric micrometer, a complete revolution of thimble advances……
A. 0.01 mm B. 0.25 mm C. 0.50 mm D. 1.00 mm

31. The least count of vernier bevel protractor is……
A. 1' B. 5' C. 10' D. 25'

32. The least count of metric micrometer is……
A. 0.01 mmB. 0.05 mm C. 0.10 mm D. 0.50 mm

33. An outside micrometer has a negative error. The correct reading can be taken by……
A. adding the negative error in the actual reading B. deducting the negative error from the actual reading
C. adding twice the negative error in the actual reading D. deducting twice the negative error from the actual reading

34. What is the zero reading of a 50 - 75 mm outside micrometer?
A. 0.00 mm B.0.01 mm C. 25.00 mm D. 50.00 mm

35. Which one of the following instruments is used to check the concentricity of the outside diameter?
A. Vernier caliper B. Outside micrometer C. Dial test indicator D .Dial caliper

36. The minimum measurement that can be correctly read with a vernier caliper is called……
A. zero reading B. least count C. main scale readingD. actual reading minus zero error

37. Metric outside micrometer has a threaded spindle with a pitch of……
A. 0.5 mm B. 0.25 mm C. 1.00 mmD. 1.50 mm

38. Zero error in micrometer means…….
A. there is negligible gap between the spindle and the anvil

B. micrometer is true
C. zero mark on the thimble is not visible
D. zero on thimble and datum line on sleeve do not coincide when measuring faces are in contact

39. Lock nut in the micrometer is provided to……..
A. control the movement of the spindle B. lock the reading after setting it over the workpiece
C. measure the workpiece accurately D. lock the micrometer when it is not in use

40. Micrometer works on the principle of……
A. screw B. bolt C. studD.nut& bolt

41. Which one of the following instruments is used to measure accurately the angle of taper?
A. Bevel gauge B. Bevel protractor
C. Vanier bevel protractor D. Taper gauge

42. The least count of a vernier caliper is……
A. 0.10 mmB. 0.01 mm C. 0.05 mm D. 0.02 mm

43. Ratchet stop in the micrometer helps to
A. control the pressure B. lock the spindle C. adjust zero errorD. hold the workpiece

44. A micrometer has a Positive error of 0.02 mm. What is the correct reading when the micrometer measures 25.41 mm ?
A. 22.39 mm B. 25.37 mm C. 25.43 mm D. 25.45 mm

45. A micrometer has a negative error of 0.03 mm. What is the correct reading when the micrometer measures 40.53 mm ?
A. 40.50 mm B. 40.56 mm C. 40.46 mm D. 40.59 mm

46. Zero error of a 50 - 75 mm outside micrometer can be checked with…….
A. Dial test indicatorB. Vernier height gauge C. Test piece D. Feeler gauge

47. The value of the smallest division on sleeve of a metric outside micrometer is……..
A. 0.50 mmB.1.00 mm C. 1.50 mmD. 2.00 mm

48. The value of one division on bevel edge of the thimble of a metric outside micrometer is…….
A. 0.10 mmB. 0.05 mm C. 0.02 mmD. 0.01 mm

49. A depth micrometer can be used to measure wide range of sizes because……
A. it is equipped with a number of extension rods B. it has a lengthy spindle
C. it has a lengthy sleeve D.is has an adjustable base

50 . The least count of a vernier outside micrometer is…….
A. 0.10 mm B. 0.01 mm C. 0.001 mm D. 0.0001 mm

51. On which part of the vernier height gauge, are the main scale divisions graduated ?
A. Vernier plateB. Beam C. Fine adjusting unit D. Base

52. While measuring with vernier bevel protractor, which part is used normally as reference surface?
A. StockB. Blade C. Dial D. Disc

53. On which part of the vernier bevel protractor, are the main scale divisions graduated ?
A. BladeB. Disc C. Dial D. Stock

54. The least count of a vernier depth gauge is…….
A. 0.10 mmB. 0.01 mm C. 0.20 mm D.0.02 mm

55. Vernier depth gauge is used for measuring……
A. external dimensions B. internal dimensions C. step, depth of blind hole D. pitch diameter

56. The least count of vernier height gauge is……..
A. 0.01 mm B. 0.02 mm C. 0.05 mm D.0.10 mm

57. While laying out, the vernier height gauge must be used on the
A. Surface plateB. Vee block C. Machine bed D. Any flat surface

58. While marking with a vernier height gauge, the workplace is generally…….
A. supported by an angle plate B. supported by another workplace
C. held by one hand D. held without support

59. The smallest inside micrometer has the graduation marked on the sleeve to a range of……
A. 10 mm B. 12 mm C. 13 mmD. 25 mm

60. The angle which is lass than 90° is called as…..
A. obtuse angleB. acute angle C. right angle D. none of the above

61. A flange micrometer is used to measure - -

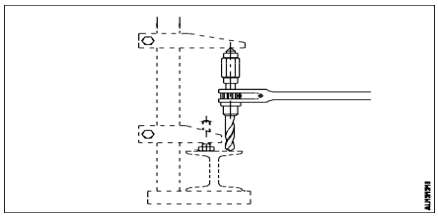
A. Outside diameter of a gear
B. chordal thickness of gear teeth
C. Addendum of the gear
D. None of the above

ANSWERS: **SYSTEM OF MEASUREMENTS**

1.D	2.C	3.B	4.A	5.C	6.D	7.D	8.D	9.D	10.B	11.D	12.A	13.D	14.A	15.C
16.B	17.D	18.C	19.B	20.D	21.B	22.C	23.A	24.A	25.D	26.A	27.B	28.D	29.D	30.C
31.B	32.A	33.A	34.D	35.C	36.B	37.A	38.D	39.B	40.D	41.C	42.D	43.A	44.A	45.B
46.C	47.A	48.D	49.A	50.C	51.B	52.A	53.B	54.D	55.C	56.B	57.A	58.A	59.C	60.B
61.B														

CUTTING TOOLS

1.What is the name of the drilling machine?



A. Breast drilling machine B. Ratchet drilling machine
C. Pneumatic drillingmachine D. Bevel gear drillingmachine

2. Which drilling machine is used to drill multiple holes in one setting of work?

A. Hand drillingmachine B. Pillar drilling machine C. Column drilling machine D. Radial drilling machine

3. What is the unit of cutting speed?

A. Meter perminute B. Meter persecond C. Centimeter perminute D. Centimeter persecond

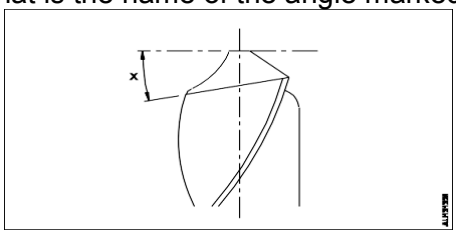
4. Which part of a drill is fitted on themachine?

A. Point B. Flute C. Shank D. Body

5. What is the name of the angle between the cutting edges in adrill?

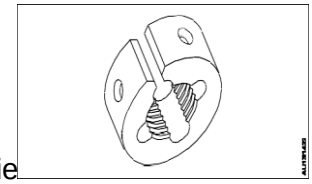
A. Helix angle B. Rake angle C. Clearanceangle D. Pointangle

6. What is the name of the angle marked as'x'?



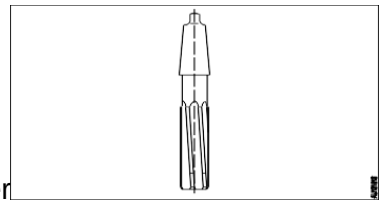
A. Rake angle B. Point angle C. Helixangle D. Lip Clearance angle

7. What is the name of thedie?



A. Soliddie B. Halfdie C. Circular split die D. Rectangle split die

8. What is the type of thereamer?



A. Taper shank drill B. Handreamer C. Straight shankdrill D. machine reamer

9. Which type of abrasive removes heavy stock ofmaterial?

A. Emerysheet B. Borom carbide C. Aluminium oxide D. Siliconcarbide

10.What is the formula for calculating the drill size forreaming?

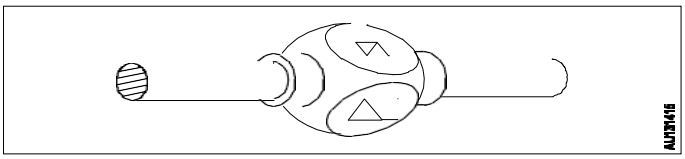
A. Drill size=Reamed size-(Under size-over size) B. Drill size=Reamed size+ (Under size + over size)

C. Drill size=Reamed size-(Under size +over size) D. Drill size=Reamed size-(Under size x over size)

11. What is the material used in handreamer?

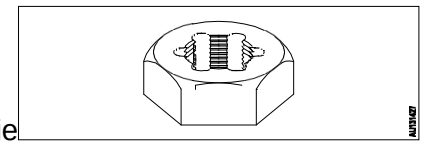
A. Mildsteel B. Brass C. H.S.S D. Castiron

12.What is the type of the tapwrench?



A. Bar type tap wrench B. 'T' Handle tap wrench C. Solid type tapwrench D. Adjustable type tapwrench

13.What is the type of thedie?



A. Die nut B. Halfdie C. Circular splitdie D. Rectangle splitdie

14.Which device is used to hold straightshank drill?

A. Stock B. Chuck C. Sleeve D. Socket

15.Which drilling machine used to drill small dia holes up to 6mm?

A. Bevel gear hand drill B .Pneumatic hand drill C. Electric hand drill lightduty D. Electric hand drill heavyduty

16.Which drilling machine achieves various spindle speed by changing the beltposition?

A. Pillar drillingmachine B. Radial drillingmachine

C. Column drillingmachine D. Sensitive bench drillingmachine

17.Which type of vice is used to hold a job for drilling?

A. Benchvice B. Legvice C. Machinevice D. Handvice

18.What is the selection of a tap drillsize?

A. Major Diameter + Pitch B. Major Diameter x Pitch

C. Major Diameter □ Pitch D. Major Diameter –Pitch

19.Which taper used in the drillingmachine?

A. Pintaper B. Brown and sharptaper C. Metrictaper D. Moarse taper

20.Which part of drill forms a cuttingedge?

A. Land B. Point C. Flute D. Body

21.Which part of drill separates theflutes?

A. Lip B. Land C. Cuttingedge D. Web

22.Which angle of drill bit prevents the friction behind the cuttingedge?

A. Pointangle B. Rakeangle C. Clearanceangle D. Helixangle

23.Which tap in a set have 4° chamfer at its end?

A. Intermediatetap B. Plugtap C. Tapertap D. Bottomingtap

24.Which tool is used in to make internal threading in thecomponent?

A. Reamer B. Drill C. Die D. Tap

25.What is the uses of handtap?

A. To make external thread B. To make internal thread

C. To bevel at the hole endD. To make enlargehole

26.Which type of the tap wrench prevent damage to thetaps?

A. Pipewrench B. Tensionwrench C. Solidwrench D. Torquewrench

27.Which tool is used to make external thread on thepipe?

A. Tap B. Drill C. Die D. Reamer

28. Which is used to hold thedie?

A. Wrench B. Spanner C. Stock D. Chuck

29. Which is the multipoint cuttingtool?

A. Chisel B. Scraper C. Reamer D. Snips

30. What is the purpose ofreamer?

A. drilling holes in thinsheets B. drilling deepholes

C. removingburrs D. enlarging and finishingholes

31. Which is the hardest abrasivematerial?

A. Diamond B. Boroncarbide C. Siliconcarbide D. Aluminiumoxide

32. Which process improves the sealing between the matingparts?

A. Filling B. Grinding C. Reaming D.Lapping

33. What is the reason for weak cutting edge of twistdrill?

A. Clearance angle is too small B. Clearance angle is too high

C. Lib angle is toosmall D. Lib angle is toohigh

34. What is the reason for twist drill does not cut?

A. Clearance angle is too small B. Clearance angle is too high

C.Rake angle is toosmall D. Rake angle is toohigh

35. What will be the effect on the hole if worn out reamer isused?

A. Oversize B. Undersize C. Correct size D. Normalsize

36. Which is used to clean the lapping plate after charging?

A. Oil B. Kerosene C. Coolant oil D. Petroleum jelly

37. Which abrasive is used to lapping soft steel and nonferrous metals?

A. Diamond B. Boron carbide C. Silicon carbide D. Aluminium oxide

38. What type of abrasives are used in honing the cast iron and hardened steel?

A. Diamond B. Boron carbide C. Silicon carbide D. Aluminium oxide

39. Which material is used to make small diameter laps?

A. Cast iron B. Aluminium C. Bronze or zinc D. Copper or brass

40. What is lapping?

A. Filing operation B. Grinding operation C. Chiselling operation D. Precision finishing operation

41. Which finishing process has a high degree of dimensional accuracy?

A.Filing B.Turning C.Grinding D.Lapping

42.What is the purpose of slit provided in the lapping tool?

A.For clearance B.For expansion C.To retain abrasive D.To adjust the sleeve

43.Why manual stroking is preferred for large quantities in honing operation?

A.To reduce cost B.To reduce time C.To keep close tolerance D.To reduce maintenance cost

44.Which operation the fine abrasive particles are used?

A.Filing B.Lapping C.Scraping D.Polishing

45.Which finishing process the tool rotate and reciprocate simultaneously?

A.Drilling B.Honing C.Lapping D.Grinding

46.Which abrasive is used for lapping soft steels and non-ferrous metals?

A.Silicon carbide B.Diamond C.Boron carbide D.Fused alumina

47.Which abrasive is used for lapping dies and gauges?

A.Boron carbide B.Silicon carbide C.Diamond D.Aluminium oxide

48.Which is the hardest abrasive material used for lapping tungsten carbide?

A.Silicon carbide B.Boron carbide C.DiamondD.Aluminium oxide

49.Which lap is used for lapping accurately finishing very small holes?

A.Close grained iron B.Rotary diamond laps C. Copper D.Brass

50. What is the process to improve the quality of fit between the mating components?

A.Lapping B.Honing C.Turning D.Filling

51.Which process small amount of materials are removed by rubbing the work?

A.Honing process B. Lapping process C.Filling process D.Turning process

52. What is the cause if the lap is harder than the workpiece?

A.Workpiece will cut the lap B.Accuracy can't be obtained

C.Lap will cut the workpiece D.Lapping operation leaves high spots

53. What is the advantages of dry lapping?

A.Better finishing and appearance B.Rough finishing C.Reduce the cost D.Processing time is reduced

54. Why manual stroking is preferred in honing operation?

A.Flexibility in operation B.Easy in operation C. Easy in mass production D.Economy in operation

55. What is the process of corrects the profiles of cylindrical surfaces?

A.Honing B.Lapping C.Scraping D.Grinding

ANSWERS:**CUTTING TOOLS**

1.B	2.D	3.A	4.C	5.D	6.D	7.C	8.A	9.D	10.C	11.C	12.C	13.A	14.B	15.A
16.D	17.C	18.D	19.D	20.C	21.D	22.C	23.C	24.D	25.B	26.C	27.C	28.C	29.C	30.D
31.A	32.D	33.B	34.A	35.B	36.B	37.D	38.C	39.D	40.D	41.D	42.B	43.C	44.B	45.B
46.D	47.A	48.C	49.B	50.A	51.B	52.A	53.A	54.A	55.A					

FASTENERS

1 - which one of the following is a removable type joint?
A. weld joint B. riveted joint C. braze joint D. bolted joint
2. Which tool is used for removing bolt and nut and performing multi work.
A. open end spanner B. ring box spanner C. punch D. chisel
3. Which is the method of locking number of bolts with the help of soft steel wire inserted and twisted?
A. Self locking B. Wire locking C. With locknut D. Locking nut with one over other
4. How self locking is achieved in Simmonds nut?
A. By inserting soft steel wire and twisted B. By fixing split pin in the slot
C. By using nylon inserts D. By a slot cut across the nut screw fitted on the top
5. What is the purpose of nylon insert provided in the self locking nut?
A.To give positive grip B.To give leak proof joint
C.To permit minimum clearance D.To give cushion effect
6.Which type of nut is used where frequent adjustment is required?
A.T-nuts B.Knurled nuts C.Cap nuts D.Square nuts
7. What type of nuts are used in coach building work?
A.Square nut B.T-nuts C.Wing nuts D.Cap nuts
8. What is the purpose of T-nuts used on machine tools?
A.For structural and machine tool building B.Suitable for frequent adjustment
C.For fixing work holding devices D.To protect bolt and thread from damage
9.Which nut provides additional bearing surface in the assembly?
A.Hexagonal nut with collar B.Knurled nuts C.Cap nuts D.Castle nuts

10.What is the purpose of three projections provided on the hexagonal weld nut?
A.To provide uniform contact on the surface B.To provide correct seating on the surface
C.To raise the surface to be welded D.To permit clearance between surface and nut
11.Where the wing nuts are used?
A.Frequent adjustment and removal B.Heavy duty assembly work
C.In coach building work D.Provide decorative appearance
12.Which locking device is used along with bolt assembly?
A.Screws B.Nuts C.Rivets D.Dowel pins
13.Which nut both the faces are machined and placed below a nut in the assembly?
A. Sawn nut B. Self locking nut C. Lock – nut D. Slotted and castle nuts
14.Which nut provides positive locking whiletightening?
A.Slotted and castle nuts B. Self locking nut C. Lock nut D. Sawn nut
15.Which lock nut nylon or fibre ring insert is placed in the upper part of the nut?
A .Sawn nut B. Self locking nut C. Slotted and castle nuts D.Lock nut
16.Which locking device is used for preventing the hexagonal nut from loosening?
A.Screws B.Dowel pins C.Locking plate D.Keys
17.Which washer is used for locking the nuts that are located near an edge or corner?
A.Lock-washers with lug B.Locking plate C.Spring washer D.Tab washer
18.Which washer offers stiff resistance against the surface of the nuts from loosening?
A.Locking plate B.Tab washers C.Lock washers with lug D.Spring washer
19.Which device is used for distributing the clamping pressure over a larger area and prevents the surface from damaging?
A.Screws B.Washers C.Bolts D.Nuts
20.Which device is used for providing an increased bearing surface for bolt heads and nuts?
A.Screws B.Dowel pins C.Keys D.Washers
21.Which washer is used with flat or oval type head screws?
A.External type B.Internal and external type C.Counter sunk type D.Internal type

22. Which bolt is used for keeping a machine stable?
A. Foundation bolt B. hook bolt C. eye bolt D. cheese head bolt
23. Thickness of a plain washer is……..
A. D/8 B. D/4 C. 2D D. 4D
24. ---------- grooves are cut in a locking plate for locking a nut.
A. 2 B.4 C. 6 D. 8
25. Castle nut is used ----------
A. for opening the nut B. to close the nut C. to check the nut D. for bearing the nut
26. -------- is not required while using a flanged nut.
A. bolt B. key C. pin D. washer
27. ----------is used for joining two parts semi-permanently.
A. nut B. bolt C. nut and bolt D. rivet
28. a split pin is used for locking in a ----------
A. castle nut B. square nut C. check nut D. flanged nut
29. A commonly used static seal is--------
A. gasket B. packing robe C, 'O' ring D. rubber washer
30. Split pin is used in -------
A. spring clip B. washer lock C. flanged nut D. castle nut
31. Tab washer is used -------
A. to protect from vibration B. for locking nuts
C. for automatic locking D. for tightening structural fabrication work
32. Which one is locking device?
A. cotter pin B. woodruff key C. grooved nut D. none of these
33. Metal may be fastened by…….
A. bolt B. rivet C. screws D. all of these
34. Which of the following has threads at both ends?
A. bolt B. tap bolt C. stud D. none of these
35. Bench vice in a workshop have -------- type of thread.
A. Metric B. square C. knuckle D. BSW
36. The diameter of imaginary cylinder at crest on which threads are cut called……
A. major diameter B. minor diameter C. pitch diameter D. none of these

ANSWERS:**FASTENERS**

1.D	2.B	3.B	4.C	5.A	6.B	7.A	8.C	9.A	10.A	11.A	12.B	13.C	14.D	15.B
16.C	17.D	18.D	19.B	20.D	21.C	22.A	23.A	24.C	25.C	26.D	27.D	28.A	29.A	30.D
31.C	32.C	33.D	34.C	35.B	36.A									

LIMIT, FITS & TOLERANCE

1.What is the term of the algebraic difference between a size, to its corresponding basic size?
A. Deviation B. Upper deviation C. Lower deviation D. Actual deviation
2.What is the name of system if the size of the hole is kept constant, shaft is varied?
A. Bilateral system B. Unilateral system C. Hole basis system D. Shaft basis system
3. Which is grade of tolerance?
A. Bilateral tolerance B. Unilateral tolerance C. Fundamental tolerance D. Fundamental
4.What is the smaller of two limits of size?
A. Actual size B. Maximum limit of size C. Minimum limit of size D. Limit of size
5. How many number of fundamental deviation in the BIS system?
A. 25 B. 20 C. 15 D. 26
6. Which term is used to indicate maximum permissible overall variation of form opposition of a feature?
A. Tolerance B. Deviation C. Geometrical tolerance D. Fundamental
7.Which symbol is used to indicate datum face to represent geometrical tolerance?
A.Circle B.Square C .Triangle D.Parallelogram
8.Which one of the following is belongs to formgroup of geometrical tolerance?
A. Angularity B. Parallelism C. Cylindricity D. Concentricity
9.Which one of the following belongs to attitude' group in geometrical tolerance?
A.PositionB.FlatnessC.ParallelismD.Straightness
10.What is the first step of lesson plan?
A.Presentation B.Application C.Preparation D.Evaluation
11.What is the term used for the relationship exists between two mating parts?
A. Fit B. Limit C. Tolerance D. Allowance
12.What is the algebraic difference between the actual size and its corresponding basic size?
A. Deviation B. Tolerance C. Actual deviation D. Upper deviation
13. What is the maximum limit of size if the basic size of the hole is 25 mm and the deviation is ± 0.2mm?
A. 25.2 mm B. 24.8 mm C. 25.02 mm D. 24.08 mm
14. Which term indicates the difference between the maximum limit of size and minimum limit of size?
A. Deviation B. Tolerance C. Actual size D. Upper deviation
15. What is the tolerance if dimension is stated as 25 ± 0.02 mm in a drawing?
A. +0.02 mm B. -0.02 mm C. 0.04 mm D. 25.00 mm
16. What is the fit if the limits of hole are 25.000 to 25.021 mm and the limits of shaft are 25.022 to 25.03 mm?
A. Clearance fit B. Interference fit C. Transition fit D. Maximum clearance fit
17. What is the advantage of adopting geometrical tolerance symbols on production drawing?
A. It indicates surface finish level B. It makes dimensional accuracy
C. It indicates method of operation D. It over come usual language barrier
18. What is the practical application of 'Circular division method' in production industry?
A. For holding jobs B. For holding tools
C. For measure surface roughness D. For measuring and setting out angle
19. Which method is used to measure or set angles in rotary table?
A. Linear division method B. Circular division method
C. Concentric circle method D. Continuous fraction method
20. What is the name of the system, if the size of the shaft is kept constant and the size of the hole is varied to get the different class of fit?
A.Tolerance B.Allowance C.Shaft basic system D.Hole basic system
21. Permissible difference from the basic dimension is called-------
A. maximum limit B. minimum limit C. tolerance D. deviation
22. Tolerance is always ------
A. zero B. negative C. positive D. none of these
23. ------- type of fit always determine clearance and it is always a positive allowance.

A. clearance fit B. transition fit C. interference fit D. None of these

24. Shrinkage fit belongs to ------ group.

A. interference B. transition C. clearance D. tolerance

25. Difference between the maximum and minimum permissible size of a produced component is ……

A. clearance B. allowance C. tolerance D. limit

26. The measured size of a dimension of any component is called…..

A. basic size B. nominal size C. permissible size D. actual size

27. Interchangeability is used for ------

A. repairing parts B. mass production C. single piece production D. all of these

28. Difference between maximum limit and minimum limit of size is called…….

A. basic size B. actual size C. tolerance D. deviation

29. Forced or press fit is a/an ….. fit.

A. clearance fit B. transition fit C. interference fit D. None of these

30. Push fit is a ----------fit.

A. clearance fit B. transition fit C. both A and B D. None of these

31. A ---- size is the size which is used for the purpose of general identification.

A. Nominal B. oversize C. both A and B D. None of these

32. Different class of fit are……

A. clearance fit B. transition fit C. interference fit D. all of these

ANSWERS: **LIMIT, FITS & TOLERANCE**

1.A	2.C	3.C	4.C	5.A	6.C	7.C	8.A	9.C	10.C	11.A	12.C	13.A	14.B	15.B
16.C	17.B	18.C	19.B	20.C	21.D	22.C	23.A	24.A	25.C	26.D	27.B	28.C	29.C	30.B
31.A	32.D													

SHEET METAL

1. The thickness of sheet metal is indicated by a series of numbers, which is called as……
   A. Number size B. Gauge C. Standard size D. None of the above
2. Bent snip is used for…….
   A. Removing the burr B. Making holes on the sheet
   C. Bending the sheet D. Cutting the sheet along curved lines
3. Which one of the following is the purpose for using plate hand groover in sheet metal worker?
   A. To lock the grooved seam B.To unlock the grooved seam
   C. To strike the sheet D.To hold the sheet in position
4. Mallet is made of…….
   A. Lead B. Brass C. Hard wood D. Cast iron
5. Copper and brass sheets are
   A. Hard and brittle B. Malleable and ductile C. Malleable and brittle D. Hard and ductile
6. Which among the following joints is suitable for roofing work?
   A. Lap joint B. Butt joint C. Hinged jointD. Double grooved seam joint
7. Which among the following tools is used for flattening the metal around punched hole?
   A. Ball pane hammerB. Riveting hammer C.Setting hammer D. Sledge hammer
8. Which among the following types of joints is used in which the end of sheet is placed over the end of another sheet and joined together ?
   A. Lap joint B. Butt joint C. Knocked up joint D. Grooved seam joint
9. Sheet metal work is carried out only on metal sheets, which are……..
   A. Forged B. Cast C. Rolled D. None of the above
10. Which one of the following is the common reason for using aluminium sheets ?
   A. Lightness B. Brightness C. Dullness D. Darkness
11. Which one of the following notches is used when making a job with a 90° bend ?
   A. Square notchB. V – notch C. Wired notchD. Slant notch
12. Which one of the following stakes is used when shaping and seaming funnels andtapered articles?
   A. Hatchet stake B. Half-moon stake C. Funnel D. Creasing stake
13. Which among the following stakes provides a double ended support ?
   A. Hatchet stakeB. Half-moon stake C. Creasing stake D. Horse stake
14. The least bend radius varies depending on the…….
   A. Material and thickness of B. Direction of plate
   C. Working temperatureD.All the above
15. For making various types of hems and seams from the sheet metal of thickness less than0.4 mm, the Allowance should be……..
   A. Twice the thickness of sheet. B. Three times the thickness of sheet.
C. Four times the thickness of sheet.D. No allowance.
16. Which one of the following sheets is used for making highly corrosive acid tanks .
   A. Black iron sheets B. Galvanised iron sheets
   C. Stainless steel sheets D. Lead sheets
17. Medium solder contains……..
   A. 37% lead & 63% tin B. 50% lead & 50% tin C. 70% lead & 30% tin D.none of above
18. Which is the flux used for soldering?
   A. Zinc chloride B. Ammonium Chloride C. Hydro chloric acid D. All the Above
19. Melting temperature range of soft solder is…….
   A. 150-3500c B.600-9000c C. 500-6000c D. None of above
20. Electrician Solder contains……..
   A. Lead 70% & Tin 30% B.Lead 58% & Tin 42% C. Lead 37% & tin 63% D. None of above
21. The height of the snap head rivet is standardized to…….
   A. 0.5 x diameter of rivet B. 0.7 x diameter of rivet
   C. 0.9 x diameter of rivet D. 1.1 x diameter of rivet

22. In a riveted joint the edges of plates are simply laid over each other and riveted. This joint is called……..
A. Lap joint B. Butt joint C. Edge joint D.Corner joint
23. In a riveted joint the plates are placed end-to-end and jointed through cover plates. This joint is called…….
A. Lap joint B. Butt joint C. Edge joint D.Corner joint
24. In a riveted joint the minimum distance from a rivet hole centre to the nearest edge of theplate is called….
A. Back pitch B. Allowance C. Tolerance D. Margin
25. A dolly is the name given to a category of tools used in……..
A. Shaping sheet metalB. Soldering sheet metal C. Piercing sheet metalD. Testing sheet metal
26. Caulking and fullering are the operation done to make riveted joints…….
A. FlexibleB. Strong C. Rust-proof D. Leak-proof
27. Which one of the following is a type of permanent fastener?
A. Cotter joint B. Flange coupling C. Knuckle jointD. Riveted joint
28. The centre to centre distance between two adjacent rivets in the same row, measured parallel to the seam or edge of the plate is called……..
A. Lead B. Pitch C. Margin D. Lag
29. The minimum distance from a rivet hole centre to the nearest edge of the plate is called……..
A. Lead B. Pitch C. Margin D. Lag
30. Which tool is used to bring the plates closely together after inserting the rivet in the hole?
A. Drift B. Dolly C. Rivetset D. Caulking tool
31. What is the materials used to manufacture rivets?
A. Rubber B. Synthetic C. Hardened steel D. Mild steel, copper, brass
32. Which type of rivet does not require skill while riveting?
A. Solid rivet B. Tubular rivet C. Hank rivet bush D. Counter sink head rivet
33. Which rivets are used in heavy structural work?
A.Pan head rivet B.Snap head rivet C. Counter sunk rivet D. Conical head rivet
34. What is the name of tool used to support the snap head rivet
A.Dolly B.Drift C.Rivet set D.Rivet snap
35. What is the name of tool to form final shape riveting head?
A.Dolly B.Rivet set C.Rivet snap D.Caulking tool
36.Which tool is closing down the edges of the plates and heads of rivets to form metal to metal join?
A.Dolly B.Rivet set C.Rivet snap D.Caulking tool
37.Which tool is used to make fluid - tight joint by pressing the riveted edge plate?
A. Dolly B. Drift C. Caulking tool D. Fullering tool

ANSWERS: **SHEET METAL**

1.B	2.D	3.A	4.C	5.B	6.D	7.A	8.A	9.C	10.A	11.B	12.C	13.D	14.D	15.D
16.D	17.B	18.D	19.A	20.B	21.B	22.A	23.B	24.D	25.A	26.D	27.D	28.B	29.C	30.C
31.D	32.B	33.A	34.A	35.C	36.D	37.D								

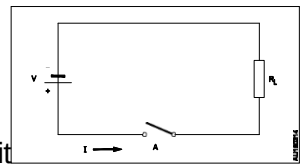
BASIC ELECTRICITY

1. How electrons move in aconductor?
   A. Current B. Resistance C. Conductance D. Voltagedifference

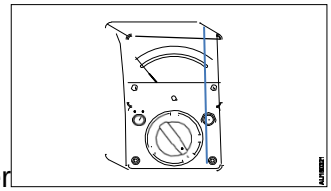
2.Which is the Ohm's Mathematical Expression?

A.I=V/R B. I=R/V C. V=I/R D. R=I/V

3. Which instrument is used to measure the electricalresistance?
   A. Ammeter B. Voltmeter C. Ohmmeter D. Wattmeter
4. Which instrument is prohibited to connect with livewire?
   A. Ammeter B. Voltmeter C. Ohm meter D. Wattmeter
5. What is the name of thecircuit?



   A. Open circuit B. Short circuit C. Closed circuit D. Parallelcircuit
6. What is the name of the electrical measuring instrument?



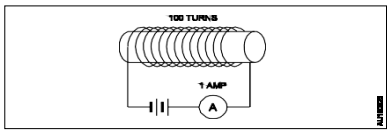
   A. Ammeter B. Voltmeter C. Wattmeter D. Multimeter
7. Which law state that "The current isdirectly proportional to the voltage and inversely proportional to the resistance"?
   A. Ohm's Law B. Hook's Law C. Boyle'sLaw D. Newton'sLaw
8. What is the purpose of colour code in cables?
   A. Colour refers the current rating B. Colour refers the voltage rating
   C. Easy identification of each circuit D. Refers the size of thewire
9. Which device have the ability tostore electricalcharge?
   A. Capacitor B. Resistor C. Insulator D. Conductor
10. Which device used to step up the voltage in the spark ignitionsystem?
   A. Ignition coil B. Spark plug C.Condenser D. High TensionCable

11. Which is the semi conductor materials?

A. Arsenic andboron B. Gallium andindium C. Germanium andsilicon D. Aluminium andantimony

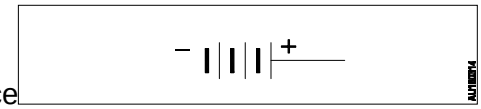
12. How the semi conductor material can be identified with atomicstructure?
   A. Two electrons in the outer most orbit B. Three electrons in the outer most orbit
   C. Four electrons in the outer most orbit D. Five electrons in the outer mostorbit
13. Which cable is the thickest used in the automobilewiring?
   A. Horncable B. Head lightcable C. Starter motorcable D. Wiper motorcable

14. What is the use of Ohmmeter in an electrical circuit?
   A. Measure theresistance B. Measure the current C. Measure the voltageD. Measure thepower
15. Which measuring instrument used to measure the Ampere, volt andresistance?
   A. Wattmeter B. Energy meterC. Galvanometer D. Multimeter
16. What does number 25 in the cable size (25/0.012)indicate?
   A. Length of thestrand B. Number of the strand C. Diameter of the strand D. Thickness of thecable
17. What is the effect of the soft iron bar in a closedcircuit?

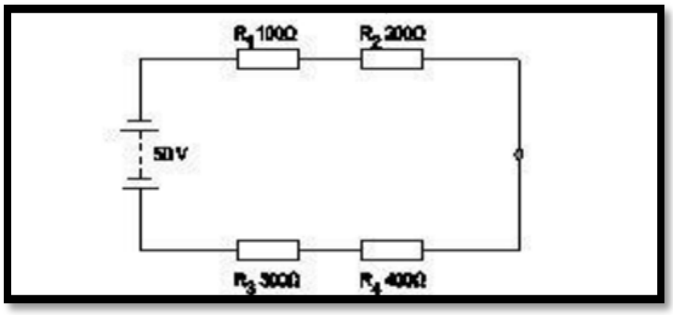


   A. Shockeffect B. Heating effect C. Magnetic effect D. Chemicaleffect

18. Which instrument is used to check the continuity of the field coils of DCmotor?
A. Ammeter B. Voltmeter C. OhmmeterD. Wattmeter
19.Which type of the circuit has an infinite resistance?
A.OpencircuitB.ShortcircuitC.Series closedcircuitD.Parallel closedcircuit
20.Which type of the circuit leads to hazard effect?
A. Open circuit B. Series circuit C. Short circuit D. Parallelcircuit
21.What is the net resistance 'R' if 'R1' and 'R2' resistance are connected inseries?
A. R = R1 + R2B. R = R1 – R2 C. R = R1 x R2 D. R =R1/R2
22.What is the name of electricalsymbol?

A. Cell B. Battery C. Earth D. Resistance 

23. What is the reason for fuse blown out in an electricalcircuit?
A. Open circuitB. Short circuitC. Series circuitD. Parallelcircuit
24. What is the unit for Quantity of electricity?
A: Mho B: Coulomb C: Volt /second D: Ampere/second
25. Calculate the electrical energy in unit consumed by 500W lamp for 5 hours.
A: 0.5 unit B: 1.0 unit C: 1.5 unit D: 2.5 unit
26. Which law states that in closed electric circuit, the applied voltage is equal to the sum of the voltage drops?
A: Ohm's law B: Laws of resistance C: Kirchhoff's first law D: Kirchhoff's second law
27. Calculate the total power of the circuit of two lamps rated as 200W/240V are connected in series across 240V supply?
A: 50 W B: 100 W C: 200 W D: 400 W
28. Which is the semiconductor material?
A: Eureka B: Ebonite C: Manganic D: Germanium
29. What is the change of resistance value of the conductor as its diameter is doubled?
A: Increases to two timesB: Decreases to four times
C: Decrease to half of the value D: No change in value of resistance
30. Which material is having negative temperature co-efficient property?
A: Mica B: Eureka C: Copper D: Manganic
31. What electrical quantities are related in Ohm's law?
A: Current, resistance and power B: Current, voltage and resistivity
C: Current, voltage and resistance D: Voltage, resistance and current density
32. What is the effect of the parallel circuit with one branch opened?
A: Current will remain same B: Whole circuit will not function
C: No current will flow in that branchD: Voltage drop increase in the opened branch
33. What is the unit of resistivity?
A: ohm / cmB: ohm / sq.cmC: ohm - metre D: ohm / metre
34. What is the formula for Quantity of electricity (Q)?
A: Current x Time B: Voltage x Current C: Current x Resistance D: Voltage x Resistance
35. What is the unit of conductance?
A: Mho B: Ohm C: Ohm-m D: Ohm/m
36. Which one defines the change in resistance in Ohm(Ω) per degree centigrade (°C)?
A: Temperature effectB: Laws of temperature C:Temperature constant D: Temperature co-efficient
37. What is the voltage drop in resistor 'R2' in the series circuit?



A: 5 volt B: 10 volt C: 15 volt D: 20 volt

38. Which is the application of series circuit?

A: Fuse in circuit B: Voltmeter connection C: Electrical lamp in homes D: Shunt resistor in ammeter

39. What is the S.I unit of specific resistance?

A: Ohm/cmB: Ohm/sq.mC: Ohm-metreD: Micro ohm/sq.cm

40. Which formula is used to calculate the power of a DC circuit?

A: Voltage x time B: Current x voltage C: Current x resistance D: Voltage x resistance

41. What is the value of resistance in an open circuit?

A: Zero B: Low C: High D: Infinity

42. Which is inversely proportional to the resistance of a conductor?

A: Length B: Resistivity C: Temperature D: Area of cross section

43. What is the capacitance value of a capacitor that requires 0.5 coulomb to charge to 35 volt?

A: 0.014 F B: 0.025 F C: 0.14 F D: 0.25 F

44. What is the unit of capacitance?

A: Mho B: Henry C: Farad D: Coulomb

45. How the value of capacitance can be decreased?

A: Increasing the plate areaB: Increasing the resistance of the plates

C: Increasing the distance between the plates D: Using high dielectric constant material

46. Which is the correct expression of capacitance C if the electric charge is Q and the voltage is V?

A: C = Q/V B: C = V/Q C: C = VQ D: C = $\sqrt{VQ}$

47. What is the effect of the electrolytic capacitor, if open circuit fault occurs?

A: It will not functionB: It will burst at once C: It will become leaky D: It will function normally

48. Which factor is determining the value of capacitance in capacitor?

A: Area of the plates B: Shape of the plates C: Material of the plates D: Thickness of the plates

49. At constant temp. resistance and cross section area are

A: directly related B: not relatedC: remains constant D: inversely related

50. According to Ohm law current and voltage are related

A: directly related B: not related C: remains constant D: inversely related

51. Reciprocal of specific resistance?

A: conductance B: conductivity C: Resistivity D: resistance

52. Eureka has ____ temperature co-efficient of Resistance. ?

A:Zero B:Positive C:Negative D:none

53. 1 matric HP =____ WATT

A: 746 B: 735.5 W C: 753.5 W D:764 W

54. what is unit of Energy ?

A:KW B: MW C: KWH D: W

55. KVL Deals with

A: charge B: power C: Energy D:current

56. Electric heater is the ____ effect of electricity?

A: Magnetic effect B: Thermocouple effectC: Heating effect D: None of these

57.Brass is the alloy of

A: copper + nickelB: copper + zinc C: copper +tin D: copper +silver

58.Electric bulb which material is used?

A: Mercury B: copper C: silver D: Tungsten

ANSWERS:**BASIC ELECTRICITY**

1.D	2.A	3.C	4.C	5.A	6.D	7.A	8.C	9.A	10.A	11.C	12.A	13.B	14.A	15.D
16.B	17.C	18.C	19.A	20.C	21.A	22.B	23.B	24.B	25.D	26.D	27.B	28.D	29.B	30.A
31.C	32.C	33.C	34.A	35.A	36.D	37.B	38.A	39.C	40.B	41.D	42.D	43.A	44.C	45.C
46.A	47.B	48.A	49.D	50.A	51.B	52.A	53.B	54.C	55.C	56.C	57.B	58.D		

BATTERY

1. How many cells are in the 12VBattery?
   A. 2cells B. 6cells C. 9cells D. 12cells
2. What is the material of positive plate in the lead acidBattery?
   A. Tin B. Leadperoxide C. Antimony D. Spongylead
3. What is the material of negative plate inthe lead acidBattery?
   A. Spongylead B. Tin C. Antimony D. Leadperoxide
4. What is the colour of positive plates inthe charged lead - acid -battery?
   A. Grey B. Brown C. White D. Black
5. How the lead acid Battery isclassified?
   A. Drycell B. Secondarycell C. Alkalinecell D. Primarycell
6. How is the Battery capacityexpressed?
   A. Ampere - hour rating B. Voltage - hour rating C. Ampererating D. Voltagerating
7. What is the energy conversion ofbattery duringdischarge?
   A. Electrical energy into heatenergy B. Chemical energy into electricalenergy
   C. Electrical energy into chemicalenergy D. Electrical energy into mechanicalenergy
8. What is the energy conversion ofbattery duringcharging?
   A. Electrical energy into chemicalenergy B. Electrical energy into heatenergy
   C. Chemical energy into electricalenergy D. Electrical energy into mechanicalenergy
9. Which shell electrons has leastenergy?
   A. K shell electron B. L shell electron C. M shell electron D. N shellelectron
10. What is the specific gravity of fully charged battery?
    A. 1.170 -1.200 B. 1.210 -1.230 C. 1.240 -1.250 D. 1.260 -1.280
11. What is the specific gravity reading range of half chargedbattery?
    A. 1.260 -1.280 B. 1.230 -1.260 C. 1.200 -1.230 D. 1.170 -1.200
12. How the number of positive and negative plates are compared in a lead acidBattery?
    A. Positive plate is equal to the negativeplate B. Negative plate is one more than positive plates
    C. Negative plate is one less than positiveplate D.Positive plates is one more than negative plates
13. What is the ampere hour rating if battery deliver 5 ampere and period of 20hours?
    A. 80 Ampere hour B. 90 Ampere hour C. 100 Ampere hour D. 110 Amperehour
14. Which acid is used in the lead acidBattery?
    A. Nitricacid B. Sulphuricacid C. Hydro bromicacid D. Hydro chloricacid
15. What is the use ofhydrometer?
A. To check specific gravity ofelectrolyte B. To check density ofwater
    C. To check temperature ofelectrolyte D. To check density sulphuricacid
16. What is the advantage of free maintenance sealedbattery?
    A. No need for check and top up distilledwater. B. No need for recharging ofbattery
    C. No chance for sulphation of battery terminals D. No need for disconnect the terminals to removebattery

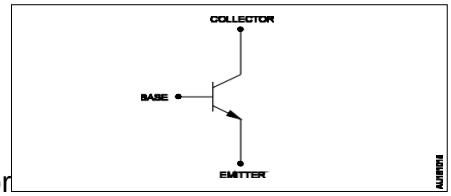
ANSWERS: **BATTERY**

1.B	2.B	3.A	4.B	5.B	6.A	7.B	8.A	9.A	10.D	11.C	12.B	13.C	14.B	15.A
16.A														

BASIC ELECTRONICS

1. What type of resistor is used in the vehicle flasherunit?
   A. Ballastresistor B. Filmresistor C. Printedresistor D. Integratedresistor
2. Which material is required to make integrated circuitchips?
   A. zinc B. steel C. silicon D. copper
3. Which electronic component is used as a solid stateswitch?
   A. Inductor B. Resistor C. Capacitor D. Transistor

4. What is the name of thesymbol?



A. Diode B. Transistor C. Triode D. Thermistor
5. Which is a temperature sensitiveresistor?
   A. Diode B. Thermistor C. Thermistor D. Transistor
6. Which component is used to measure the engine coolanttemperature?
   A. Thermistor B. Resistor C.Transistor D. Diode

7. What is the permissible voltage drop in the electricalcircuit?
   A. 0.1V B. 0.2V C. 0.3V D. 0.4V
8. How many valance electrons does a semiconductor have in their valence cell?
A. 6 B. 5 C.2 D.4
9.Diode is a _____ terminal device.
   A. Three B. Two C.Four D.Single
10.Transistor is a ____ terminal device.
   A. Three B. Two C.Four D.Single
11. What is the threshold voltage for silicon diode?
   A.0.3v B.0.7v C.1v D.2.3v
12. What is the knee voltage of germanium diode?
   A.0.3v B.0.7v C.1v D.2.3v
13.Which of the following diode is operated in reverse bias condition?
   A. LED B. Tunnel Diode C. Zener Diode D.None of these
14.Diode is _____ device.
   A. Unidirectional B Bidirectional C. Both A & B d. Can't say
15.When a penta valent impurity is added to a pure semiconductor ,the new type semiconductor created is called__
   A. P-Type B. N-Type C.PN-Type D.None of these
16.When a tri valent impurity is added to a pure semiconductor ,the new type semiconductor created is called__
   A. P-Type B. N-Type C.PN-Type D.None of these
17. How many layers does a transistor have?
   A. Two B. Four C.Three D. One
18.The most commonly used semiconductor is _____
   A. Silicon B. Germanium C. Carbon D.Sulphur
19. When a pure semiconductor is heated its resistance is _____
   A.Goes up B. Goes down C. Remains same D.Can't say
20. A Penta valent impurity has _____ number of electron in it's valence cell.
A. 4 B. 6 C.3 D.5
21. 20. A Tri valent impurity has _____ number of electron in it's valence cell.
A. 4 B. 6 C.3 D.5
22.With forward bias to a PN junction,the width of depletion layer_____
   A.Decreases B. Increases C.remain same D. Can't say
23. A semiconductor is formed by _____ bond
   A. Covalent B. Electrovalent C.Co-ordinate D. None of these
24. A semiconductor has _____ temperature coefficient of resistance.
   A. Positive B. Zero C. Negative D. None of above

25.Addition of trivalent impurity to a semiconductor creates many _____
A. Holes B. Free electrons C. Valence electrons D. Protons
26. Addition of trivalent impurity to a semiconductor creates many _____
A. Holes B. Free electrons C. Valence electrons D. Protons
27.A transistor has _____ number of PN junction.
A. One B. Two C.Three D. Four
28.The base of transistor is _____ doped.
A. Heavily B. Lightly C. Moderately D. Can't say
29.The emitter of transistor is _____ doped.
A. Heavily B. Lightly C. Moderately D. Can't say
30.The Collector of transistor is _____ doped.
A. Heavily B. Lightly C. Moderately D. Can't say

ANSWERS: **BASIC ELECTRONICS**

1.A	2.C	3.D	4.B	5.C	6.A	7.B	8.D	9.B	10.A	11.B	12.A	13.C	14.A	15.B
16.A	17.C	18.A	19.B	20.D	21.C	22.A	23.A	24.C	25.A	26.B	27.B	28.C	29.A	30.C

WELDING

1. Which one of the following is a temporary joint?
   A. Welded joint B. Riveted joint C. Soldered joint D. Press fit joint
2. Which type of fire extinguisher is used in a welding shop?
   A. Foam type extinguisher B. Dry powder extinguisher C. CO2 extinguisher D. Halon extinguisher
3. The arc utilized in electric arc welding is a…….
   A. High voltage, high current discharge B. Low voltage, low current discharge
   C. Low voltage, high current discharge D.High voltage, low current discharge
4. Which one of the following is the type of transformer used in arc welding?
   A. Step down B. Step up C. One-to-one D. Capable of increasing supply voltage
5. The welding machine, which is used to convert AC welding supply to DC welding supply is……
   A. Motor generator set B. Engine generator set C. Rectifier set D. Welding transformer
6. The size of a welding machine is determined by……
   A. Input amperage B. Output amperage C. Open circuit voltage D. Closed circuit voltage
7. The position in which it is easiest to weld is…….
   A. Flat B. Vertical C. Horizontal D. Overhead
8. The electrode size refers to…….
   A. diameter of its core wire B. diameter (overall) of electrode
   C. thickness of flux coating D. length of electrode
9. One of the functions of electrode coating is……
   A. to increase welding current B. to stabilize the arc
   C. to prevent rusting D. to control arc temperature
10. The electrodes are manufactured in two standard lengths namely…….
   A. 350 mm and 250 mm B. 350 mm and 450 mm C. 400 mm and 500 mm D. 12"and 10"
11. In an acetylene cylinder, the acetylene is dissolved in……..
   A. Water B. Carbon Dioxide C. Acetone D. Mercury
12. The function of the central hole in the tip of the cutting blowpipe is……..
   A. Supply oxygen for preheating B. Supply acetylene for preheating
   C. Supply oxygen for cutting D. Supply acetylene for cutting
13. Which fuel gas is used for cutting deep under water?
   A. AcetyleneB. Hydrogen C. LPG D. Methane
14. If L (mm) is the length of the inner cone of the flame, the tip-to-metal distance should be……
   A. L mm B. L + 2 mm C. L + 4 mm D. L + 6 mm
15. The correct flame for preheating before cutting is…….
   A. oxidizing flameB. neutral flame C. carburising flameD. slightly carburizing flame
16. The correct colours for oxygen and acetylene hoses are……
   A. Red for oxygen and blue for acetylene B. Black for oxygen and red for acetylene
   C. Black for oxygen and maroon for acetylene D. Red for oxygen and maroon for acetylene
17. While gas cutting the nozzle should…….
   A. almost touch the workB. be 10 mm away from work
   C. be 2 mm away from work D. be 5 mm away from work
18. If the blowpipe is moved to and fro frequently while cutting the kerf will……
   A. be more B.of correct size C. be less D. not be affected
19. In gas cutting, if too little cutting oxygen is supplied…….
   A. the metal will be cooled downB. the kerf will be narrow
   C. the kerf will be wideD.the metal will fail to cut completely
20. The top edge is melted round and the cut face is not smooth in gas cutting. This is due to……..
   A. extremely slow cutting speed B. insufficient acetylene pressure
   C. the tip being held too highD. too much cutting oxygen pressure
21. In a gas cut plate, the cut shows grooves and has deep drag lines. This is due to…….
   A. tip too close to the cut surfaceB. too much travel speed C. less oxygen pressure D. smaller size cutting nozzle
22. The size of the cutting nozzle used in oxy-acetylene cutting process depends mainly on……
   A. thickness of metal to be cutB.purity of oxygen C. duration of cut D. type of cutting blowpipe
23. Acetylene is a fuel gas for gas cutting & welding composed of……..
   A. 7.7 of carbon & 92.3 % of hydrogen B. 92.3% carbon & 7.7 % hydrogen
   C. 100% carbon D. 50% carbon & 50% hydrogrn
24. Neutral flame in gas welding contains
   A. oxygen &Acetylene in equal proportion B. More oxygen than Acetylene

C. less oxygen than Acetylene D. None of the above

25. Which arc welding machine can be used anywhere in the field work even away from electric lines?
A. Rectifier set B. Motor generator set C. Engine generator set D. AC welding transformer

26. Which arc welding machine provides better heat distribution in the electrode and job?
A. Rectifier set B. Motor generator set C. Welding transformer D. Engine generator set

27.What is the colour painted on the acetylene gas cylinders?
A.Black B.Green C.Blue D.Maroon

28.What is the oxygen cylinder colour?
A.Red B.Blue C.Black D.Maroon

29. What is the storing capacity of oxygen cylinder?
A.7 m3 B.10 m3 C .14 m3 D.15 m3

30.Which equipment is used to protect the body from flying spark during gas cutting?
A.Leather cap B.Leather apron C.Leather shoes D.Cutting goggles

31.Which type of gas flame is the most suitable for brazing?
A.oxy-LP gas flame B.oxy-coal gas flame C.oxy-acetylene gas flame D. oxy-hydrogen gas flame

32.How the gas cylinders are kept in the trolley in gas welding plant?
A.Both cylinders to be in upright position B.Both cylinders to be in horizontal position
C.Both cylinders in angular position D.Both cylinders in upside down position

33. How the gas cylinders are transported to the work spot?
A.By rolling the cylinder B.Using rollers and moving to spot
C.By manually lifting to the spot D.Loading on trolley and shift it

34.What is the position of blow pipe nozzle while igniting the flame?
A.Upright position B.Horizontal position C.Upside down position D.Safe direction

35.What is meant by polarity?
A.Normal arc length B.Direction of current flow C.Long arc length D.Short arc length

36.What is meant by the similar metals are joining together by melting?
A.Brazing B.Gas weld C.Soldering D.Fusion weld

37.What is the disadvantage of AC welding transformer?
A.More initial cost B.Not free from arc blow
C.More maintenance cost D.Not suitable for welding non ferrous metal

38. Which factor determines the current setting during welding?
A.Types of joint B.Position of weld C.Length of electrode D.Diameter of electrode

39. What is the OCV for welding in step-down transformer which reduces the main supply voltage (220 or 440 volts)?
A.40 and 100 volt B.50 and 100 volt C.30 and 20 volt D.20 and 25 volt

40.Which is the welding machine designed to supply both A.C and D.C current?
A.Rectifier setB.Transformer set C.Motor generator set D.Engine generator set

41.Why the cylinder keys are not removed from the cylinder while welding?
A.To prevent gas leak B.To adjust the gas supply
C.To open and close frequently D.To close quickly in case of fire

42.Which process blow out the cylinder valve socket before connecting the regulator?
A.Cracking B.Back fire C.Flash back D.Pressure testing

43. What is the purpose of cellulosic electrode in arc welding process?
A.Very easy to remove the deposited slag B.Used for high strength steel
C.It is used for low carbon steel D.It is suitable for all position

44. Which brush is used for cleaning the welding slag?
A. wire brush B. carbon brush C. wire wheel brush D. hand brush

45. Metal inert gas welding is also called-----
A. plasma B. MIG C. TIG D. none of these

ANSWERS: WELDING

1.D	2.C	3.C	4.A	5.C	6.B	7.A	8.A	9.B	10.B	11.C	12.C	13.B	14.B	15.B
16.C	17.D	18.A	19.D	20.C	21.A	22.A	23.B	24.A	25.C	26.A	27.D	28.C	29.A	30.B
31.C	32.A	33.D	34.D	35.B	36.D	37.D	38.D	39.A	40.A	41.D	42.A	43.A	44.B	45.B

HEAT TREATMENT PROCESS

1. The purpose of normalizing steel is to……
   A.remove induced stresses B. improve machinability
   C. soften the steel D. increase the toughness and reduce brittleness
2. A carbon steel piece is heated just above 730°C, maintained at that temperature for a few hours and then slowly cooled. What heat treatment process is carried out ?
   A. Normalizing B. Casehardening C. Hardening D. Annealing
3. A given component cracked after heat treatment. What can be the possible reason ?
A. It was heated for long time B. It was not properly cleaned before heating
C. It was suddenly cooled in brine D.It was slowly cooled in air
4. Case hardening is a method of producing hard skin on the surface of……
   A. High-carbon steel parts B. Cast iron (heavy parts)
   C. Low-carbon steel parts D. Alloy steel parts
5. To reduce internal stresses of a hardened tool, the method of heat treatment generally appliedis……
   A. Stabilising B. Annealing C. Normalising D. Tempering
6. The toughness in a steel is increased and brittleness is decreased by a heat treatment operation called as……
   A. Annealing B. Normalizing C. Tempering D. Case hardening
7. In a case hardening process, ammonia gas is introduced on steel; the process is known as……..
   A. Cyaniding B. Nitriding C. Carburizing D. Ammonising
8. "Cyaniding " and "Nitriding" are two methods of
   A. Hardening B. Case hardening C. TemperingD. Normalising
9. After heating up to required hardening temperature, why must tool steels be quenched ?
   A. To induce internal stresses B.To build up hardening structure
   C. To fall off the scale D. To return it to its original structure
10. Heat treatment of metals is necessary ……..
   A. To produce certain desired properties B. To make good appearance on the component
   C. To increase strength of the metal D. To make the metal rust-proof
11. The external surface of the part made of mild steel can be hardened by……..
   A. TemperingB. Normalising C. Case hardening D. Hardening
12. In nitriding process the NH3 gas is introduced at…….
   A. 500°C to 560°C B. 575°C to 600°C C. 600°C to 650°CD. 650°C to 700°C
13. The instrument used to measure high temperature in the furnace is……..
   A. Thermometer B. Barometer C. ColorimeterD. Pyrometer
14. Which one of the following processes is used for hardening the surface of tool steel ?
   A. Carburizing B. Cyaniding C. Induction hardeningD. Hardening
15. Lower critical temperature of high carbon steel while hardening is
   A. 960°CB. 900°C C. 723°C D. 560°C
16. The purpose of heat treatment is……
   A. To change the mechanical properties of steel. B. To change the internal structure of steel
   C. To change the appearance of the component. D. To change the chemical properties of steel.
17. Which one of the following processes is adopted to improve the internal structure of steel,which has been subjected to severe hammering ?
   A. Hardening B. Annealing C. NormalisingD. Tempering
18. Which one of the following processes by which steel is heated to the required temperatureand then cooled slowly in the furnace itself ?
   A. Tempering B. Hardening C. NitridingD. Annealing
19. What is the main purpose of annealing ?
   A. To improve machinabilityB. To improve magnetism
   C. To increase hardness D. To increase toughness
20. Which one of the following quenching media is used for hardening H.S.S. tool ?
   A. Water B. Brine solution C. Oil D. Soda water

21. Which one of the following is the purpose of tempering a hardened steel component ?
A. To increase toughnessB.To increase ductility
C. To increase hardness D. To reduce hardness
22. While normalizing the steel should be cooled in……..
A. in still air to room temperature B.in oil C. by forced air D. in water
23. The process of increasing carbon percentage on the surface of low-carbon steel is known as
A. Hardening B. Nitriding C. Carburizing D. Tempering
24. The process of producing a component with tough and ductile core and a hard outer surface is known as……
A. Hardening B. Case hardening C. Tempering D. Annealing
25. The process of heating steel to about 40°C above the upper critical temperature and cooling it in still air to room temperature is known as…….
A. Hardening B. Annealing C. Normalizing D. Tempering
26. In heat treatment process annealing is done to……
A. increase the toughness B. increase the softness C. increase the hardness D. increase the brittleness
27. After hardening process, the metal becomes more hardened and also will become more
A. Brittle B. Ductile C. MalleableD. Tough
28. For best result of annealing, the heated steel piece is cooled by……..
A. slowly in the furnace itself by switching off the heat supply
B. by removing the piece from the furnace and allowing it to cool in open air
C. by removing the piece from the furnace and placing it under a blast of air
D. by removing the piece from the furnace and dipping it in a tank containing water
29. What is the casting procedure for producing a cylinder liner?
A. die casting B. hollow casting C. centrifugal casting D. sand casting
30. A cylinder block is constructed by -------- process.
A. die casting B. hollow casting C. centrifugal casting D. forging

ANSWER: **HEAT TREATMENT PROCESS**

1.A	2.D	3.C	4.C	5.D	6.C	7.B	8.B	9.B	10.A	11.C	12.A	13.D	14.C	15.C
16.A	17.C	18.D	19.A	20.C	21.A	22.A	23.C	24.B	25.C	26.B	27.A	28.A	29.C	30.B

HYDRAULICS & PNEUMATICS

1.Which energy is converted in hydraulic pump?
A.Thermal energy to hydraulic energy B.Electrical energy to hydraulic energy
C.Pneumatic energy to hydraulic energy D.Mechanical energy to hydraulic energy
2.Which valve is used to permit fluid to flow in one direction and block the flow in opposite direction?
A.Globe valve B.Check valve C.Shuttle valve D.Pressure relief valve
3.Which pressure value is read through pressure gauge?
A.Gauge Pressure B.Atmospheric Pressure C.Vacuum Pressure D.Absolute Pressure
4. Which formula is used to calculate the pressure?
A.Force + Area B.Force/Area C.Force – Area D.Force x Area
5. Which formula is used to calculate the absolute pressure?
A.Atmospheric Pressure - Gauge Pressure B.Atmospheric Pressure + Gauge Pressure
C.Atmospheric Pressure x Gauge Pressure D.Atmospheric Pressure ÷ Gauge Pressure
6. What is the unit of pressure in SI unit?
A.lb/in2 B. Pascal C. Gram/ cm2 D.kg/ m2
7.Which is the metric unit of pressure equal to 1,00,000Pascal?
A. Millibar B. Kilo Pascal C. Bar D. Newton
8.What is the value of bar in metric unit of pressure?
A.1 kg/ mm2 B.1 kg/ cm2 C.1 kg/ m2 D.1 kg/ dm2
9.Which formula is used to calculate force?
A.Pressure ÷ Area B.Pressure x Area C.Pressure – Area D.Pressure + Area
10.What is the unit of force in SI unit?
A.Kilogram B.Newton C.Dyne D.Pounds
11.Which property of oil catches fire and continue to be in flame?
A.Flash point B. Fire point C.Pour point D.Splash point
12. What is the property of lubricant the temperature at that the vapour is given off from the oil?
A. Oiliness B. Fire point C. Pour point D. Flash point
13. How hydraulic transmission force is controlled?
A.By air B.By gears C.By fluids D.By electric
14. Which valve has two inlet / one outlet in hydraulic / pneumatic system?
A.Slide valve B.Check valve C.Shuttle valve D.Solenoid valve
15. Why in hydraulic pump the filter is installed in suction line?
A.Reduce the oil to enter B.Preventing foreign matter
C.Reduce pressure in the pump D.Increase the pressure in the pump
16. Which System gets compressed air as energy inputs?
A.Hydraulic System B.Pneumatic System C.Electrical System D.Mechanical System
17.Which Pressure value is measured with respect to perfect vacuum?
A.Atmospheric Pressure B.Absolute Pressure C.Gauge Pressure D.Vacuum Pressure
18.Which term is used to move load with less efforts?
A.PneumaticB.HydraulicC.Pressure D.Flow of Air
19.Which one of the following comes under the applications of pneumatics?
A.Drag B.Push C.Close D.Open
20. Which system is for used liquid as transmitting fluid?
A.Pneumatic system B.Hydraulic C.Electrical D.Mechanical
21. Which valves are used to control the direction of the flow of fluid?
A.Flow control valve B.Non - return valve C.Pressure control valve D.Directional control valve
22. Which part of the single acting cylinder is attached with the load?
A.Spring B.Seal C.Piston D. Piston Rod
23.What is the purpose of direction control valve in hydraulic system?
A.Open or close B. Increase the pressure C.Decrease the pressure D.Decrease the pressure

24. Which valve block flow in one direction and allow free flow in the other direction?
A.Non- return valve B.4/2 way Valve C.Gate valve D.Global valve

25. Which energy is present in oil by virtue of its motion?
A.Potential energy B.Kinetic energy C.Static energy D.Heat energy
26.What is the name of the device used to remove dust, chips and other foreign particles from the fluid?
A.Pressure regulating valve B.Filter C.Accumulator D.Regulator
27. Which valve is used to remove the excess amount of oil in the hydraulic system?
A.Pressure relief valve B.Pressure reducing valve C.Pressure regulator valve D.Roller valve
28. Which valve is a orifice or restrictor in hydraulic system?
A.Flow control valve B.Check valve C.Direction control valve D.Pressure Valve
29.Which type of filters are used for trapping various sizes of particular matter?
A.Mechanical filter B.Absorbent filter C.Magnetic filterD.Suction filter
30.Which type of filter is used to remove ferrous materials from oil in hydraulic system?
A.Pressure line filter B.Offline filter C.Magnetic filter D.Absorbent filter
31.Which device is used for handling and removing contaminations from hydraulic oil?
A.Hydraulic filter B.Actuators C.Valve D.Regulator
32. Which bearing material is used in connecting rod and electrical motors?
A.White metal B.Sintered alloys C.Aluminium alloyD.Copper lead alloys
33. Which part of double acting cylinder prevents air leakage from cylinder to atmosphere?
A.Piston sealB.Rod Seal C.Piston end D.Rod end
34. What is the name of the term for the interlocked air bubbles and pockets in the hydraulic pipe lines and components?
A.Cavitation B.Static pressure C.Vapour Pressure D.Pressure jerks
35. Which valve prevents the system pressure from rising too high if the pressure regulating valve fails?
A .Check valve B.Relief valve C.Pressure valve D.Direction control valve
36.Which type of filter helps to protect the pump from fluid contaminations?
A.Suction filter B.Magnetic filter C.Absorbent filter D.Mechanical filter
37. What is the cause if oil flow under pressure while passing through the restricted passage?
A.Increase Heat B.Decrease Heat C.Decrease volume D.Increase pressure
38. What is the reason the relay is used in electro - pneumatics?
A.Signal processing B.To control valves C.To sense the temperatures D.Sequencing

ANSWERS: **HYDRAULICS & PNEUMATICS**

1.D	2.B	3.A	4.B	5.B	6.B	7.C	8.B	9.B	10.B	11.B	12.D	13.C	14.C	15.B
16.B	17.B	18.A	19.B	20.B	21.D	22.D	23.A	24.A	25.B	26.B	27.A	28.A	29.B	30.C
31.A	32.D	33.B	34.A	35.B	36.A	37.A	38.A							

ENGINE

1. The working cycle in case of four stroke engine is completed in following number of revolutions of crank shaft…
A.½ B.1 C. 2 D .4
2. In a diesel engine, the fuel is ignited by……
A.spark B.injectedfuel C.heat resulting from compressing air that is supplied for combustion
D. ignition
3. Scavenging air in diesel enginemeans
A. air used for combustion sent under pressure
B. forced air for coolingcylinder
C .burnt air containing products ofcombustion
D. air used for forcing burnt gases out of engine's cylinder during the exhaustperiod
4.The ratio of indicated thermal efficiency to the corresponding air standard cycle efficiencyis called……
A. netefficiency B. Efficiencyratio C.relativeefficiency D. overallefficiency
5. Compression ratio of IC enginesis
A. the ratio of volumes of air in cylinder before compression stroke and after compressionstroke
B. volume displaced by piston per stroke and clearance volume incylinder
C. ratio of pressure after compression and beforecompression
D. swept volume/cylindervolume
6. The air standard efficiency of an Otto cycle compared to diesel cycle for the given compression ratiois…
A. same B. less C. more D. more or less depending on powerrating
7.If the intake air temperature of I.C. engine increases, its efficiencywill--------
A. increase B. decrease C. remainsame D. unpredictable
8.An engine indicator is used to determine thefollowing……..
A. speed B. temperature C. volume of cylinder D. M.E.P. and I.H.P.
9.If the compression ratio of an engine working on Otto cycle is increased from 5 to 7,the %age increase in efficiency will be……
A. 2% B. 4% C. 8% D.14%
10. In a typical medium speed 4-stroke cycle diesel engine the inletvalve…..
A. opens at 20° before top dead center and closes at 35° after the bottom dead center
B. opens at top dead center and closes at bottom dead center
C. opens at 10° after top dead center and closes 20° before the bottom dead center
D. may open or close any where
11. The pressure and temperature at the end of compression stroke in a petrol engine are of the order of…….
A. 4 – 6 kg/cm2 and 200 – 250°C B.6 – 12 kg/cm2 and 250 – 350°C
C. 12 – 20 kg/cm2 and 350 –450°C D.20 – 30 kg/cm2 and 450 –500°C
12.The maximum temperature in the I.C. engine cylinder is of the orderof….
A. 500-1000°C B.1000- 1500°C C.1500-2000°C D.2000-2500°C
13.The thermal efficiency of a diesel cycle having fixed compression ratio, with increase in cut- off ratio will…..
A. increase B. decrease C. beindependent D. may increase or decrease depending on otherfactors
14.The air requirement of a petrol engine during starting compared to theoretical air required for complete combustion is
A. more B. loss C. Same D. may be more or less depending on engine capacity
15. A4-stroke produces one power stroke in…….
A. 2 revolutions of crank shaft B. 4 revolutions of crankshaft
C.6 revolutions of crankshaft D.8 revolutions of crankshaft
16. A2-stroke Cycle engine produces one power stroke in…….
A. each revolution of crankshaft B.2 revolutions of crankshaft
C. 3 revolutions of crankshaft D. 4 revolutions of crankshaft
17. Which one of the following gives the correct position of inlet and exhaust valves during the power stroke?
A. inletvalveopensandexhaustvalvecloses B. exhaustvalveopensandinletvalvecloses
C. both valves remain in closed position D. both valves remaining open position
18. In an engine stroke length is…..
A. half the throw of crank B. equal to throw of crank
C. double the throw of crank D. three times the throw of crank
19. The stroke of an engine is…..
A. inside diameter of the cylinder B. distance between TDC and BDC
C. volume of the cylinder D. length of the connect ingrod

20. A four-cylinder engine has a capacity of 2.4litres.The swept volume of one cylinder is……
(a)400cm³ (b)600cm³ (c)1200cm³ (d) 2400cm³

21. An engine has a clearance volumeof100cm³andaswept volumeof800cm³.The compression ratio is…
(a)10:1 (b) 9:1 (c) 8:1 (d)7:1

22. A single cylinder engine, which has a power stroke in every two revolutions of the cranks haft is said to be working on…..
(a) single-strokecycle (b)two-strokecycle (c)three-strokecycle (d) four-strokecycle

23. Which one of the following gives the correct sequence of OTTO cycle engine?
A. induction,power,compression,exhaust B.induction,exhaust,compression,power
C. induction, compression,power,exhaust D.induction,power,exhaust,compression

24. If a4-strokeenginemakes1000 revolutions per minute, the number of power strokes per minute will be…
(a) 250 (b) 500 (c) 750 (d) 1000

25. Which one of the following steps will result in increasing the stroke length?
(a) piston made shorter(b)connecting rod lengthened
(c) crank shaft throw increased(d)gudgeon-pin moved near to the crankshaft

26. Which one of the following engine components *'carries' the engine over it non-working strokes?*
(a) piston(b) crankshaft (c)connecting rod (d)flywheel

27. Where 'Radial' Type enginesare mostly used ?
A. Gensets,B. Aero planes,C. Buses, D. Car

28.What is TDC?
A. Top dead cycle, B. Top duty cycle, C .Top dead Centre, D .Top dead centre

29. The distance travelled by piston from TDC to BDC is called.....
A. Stroke, B. Cycle, C. Bore, D.Compression ratio

30. Identify the "constant speed engine".
A. Scooter engine, B. Motor cycle engine, C. Generator set engine, D. Car engine

31. Engine speed is expressed in……..
A. R.P.M, B. HP, C. Km/hr, D. Miles/hr

32. Identify the external combustion engine
A. Steam engine, B. Diesel engine, C. Petrol engine, D. CNG engine

33. Fuel is ignited due to the heat of the highly compressed air. Combustion takes place at constant pressure. Identify the engine from the above description?
A. SI engine, B .CI engine, C. Electric engine, D. Steam engine

34. In this engine, a portion of charge escapes through the exhaust port and because of this, the fuel efficiency is less. What is this "Engine type"?
A. 4 stroke engine, B. 2 stroke engine, C. Steam engine, D. Electric engine

35.In an engine, compression ratio is 24:1 and diesel is used as fuel. What is this engine?
A. SI engine, B. CI engine, C. Electric engine, D. Steam engine

36. An engine is fitted with fuel injection pump and high pressure pipes connecting injectors. Identify the engine?
A. CI engine, B. SI engine, C. Electric engine, D .Steam engine

37.The compression ratio of an engine is 10:1 maximum. Petrol is used as fuel.Identify the engine?
A. SI engine, B . CI engine, C. Steam engine, D. Electric engine

38.What is the arrangement of cylinders in a "v" type engine?
A. cylinders in a horizontal line, B Cylinders positioned in "v"shape
C. Cylinders positioned radially, D. Cylinders arranged horizontally opposite to each other

39.What is the arrangement of cylinders in a "in line"engine?
A. cylinders in a horizontal line, B. Cylinders positioned in "v"shape
C. Cylinders positioned radially, D. Cylinders arranged horizontally opposed to each other

40.What is the arrangement of cylinders in a opposed engine?
A. All cylinders in a horizontal line, B. Cylinders positioned in "v"shape
C. Cylinders positioned radially, D. Cylinders arranged horizontally opposed to each other

41.What in the arrangement of cylinders of cylinders in a radial engine.

A. All cylinders in a horizontal line, B. Cylinders positioned in "v"shape
C. Cylinders positioned radially, D. Cylinders arranged horizontally opposed to each other

42. Which engine has maximum fuel efficiency?
A. "v"engine,B. in lineengine, C. radialengine, D. opposed engine

43. In which engine crankshaft length ismaximum?
A."V"engine,B. in lineengine, C. radialengine, D. opposedengine

44. Which type of engine emits carbon monoxide in exhaust pipe?
A. Petrolengine,B. Dieselengine, C. Steamengine,D. Electric engine

45. Name the engine which runs smoother at higher RPM.
A. "v"engine, B. inlineengine,C. radialengine,D. opposedengine

46. Name the engine which gives better balancing and more uniform torque.
A. V engine, B. inlineengine,C. radialengine, D. opposed engine

47.Which fuel is mostly used in S-Iengines.
A. Diesel, B. Petrol, C. Steam, D.Kerosene

48. Name the stroke of a 4 stroke engine after combustion from TDC to BDC movement.
A. suction stroke, B. compression stroke, C. power stroke, D. exhaust stroke

49. What is the correct expansion of"mep".
A. maximum effective pressure, B. mean effective pressure
C. maximum effective pressure, D. more effective pressure

50. What does the formuladenote? 2nNT/4500 = ?, (where N is the RPM of crankshaft and T is the torque produced)
A. thermal efficiency, B. compression ratio, C.indicated horse power, D. brake horse power

51. Difference of IHP and BHP is knownas...
A. frictional horse power, B. indicated horse power, C. brake horse power, D. horse power

52. The power developed in cylinder of engineis.....
A. IHP, B. swept volume, C. horse power, D. mechanical efficiency

53. Which item is covered under "technical specification ofengine"?
A. Registration number, B. Chassis number, C. Number of Cylinders, D. Engine number

54. ThemeasurementofpowerinSAEiscalled..
A. IHP B. BHP, C. HP, D.power

55. Asetofoperationsperformedinsequencebythemotionofthepistoninanenginetoproducethe power iscalled.....
A. stroke, B. cycle,C. ignition, D. firingorder

56. Starting point of piston's upward movement in the cylinder iscalled.....
A. TDC, B. BDC, C. cycle, D. firingorder

57.Starting point of the pistons down word movement in the cylinder iscalled...
A. TDC, B. BDC, C. cycle, D. firing order

58. ThedistancetravelledbythepistonfromTDCtoBDCorBDCtoTDCiscalled…..
A. cycle, B. stroke, C. bore, D. firingorder

59. A four stroke engine produces one power strokein...
A. 4 revolutions of crankshaft, B. 2 revolutions of crankshaft
C. 6 revolutions of crankshaft, D. 8 revolutions of crankshaft

60. During power stroke the valve position is (as givenbelow)...
A. inlet opens and exhaust valve closes, B exhaust valve opens and inlet valve closes
C. both valves remain in closed position, D. both valves remain in open position

61. Compression ratio of a CI engine is....
A. 6:1 B. 9: 1, C.8.5:1, D. 24:1

62.Which is the compression ratio of a SI engine?
A. 11:1 B. 24:1, C. 23:1, D. 23.5:1

63.Which is the compression pressure of a CI engine?
A.380 psi B. 120 psi, C. 110 psi, D. 100psi

64. Which is the compression pressure of a SI engine?
A.150Psi.B. 450psi,C. 475psi,D. 500psi

65.What is the name of theindicator? - -

A.TemperaturewarningB.Oil level / pressure warning 

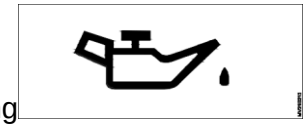
C.Electrical system warning D. Transmission warning

66. What is the name of the indicator?

A. Electrical system warning B. Transmission warning

C. Tyre pressure monitoring D. High beam indicator

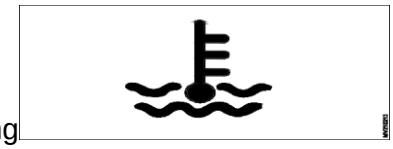
67. What is the name of theindicator?



A. Temperaturewarning B. Oil level / pressure warning

C. Electrical system warning D. Transmission warning

68.What is the name of theindicator?



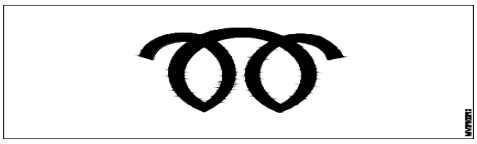
A. Temperaturewarning B. Oil level / pressure warning

C. Electrical system warning D. Transmissionwarning

69. What is the name ofindicator?

A.Seat belt indicator B. Air bag indicator C. Brake indicator D .ABS indicator

70.What is the name of the indicator?



A. Economyindicator B. Electric powersteering C. Glow plug indicator D. Check engine light

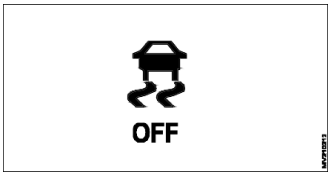
71. What is the name of the indicator?

A. Centre different airlocks B. Proximity sensor C. Economymode D. Electric power steering

72.What is the name of the indicator?

A. Centre differential lock B. Proximity sensor C. Economymode D. Electric power steering

73. What is the name of the indicator?



A. Deadbulb B. Cruise control C. Traction control D. Stabilitycontrol

74. Which engine has morelength?

A. Opposed engine‘ B. V’engine C. Inline engine D. Radial engine

75. Which is the engine having cylinders in 180°?

A. Inline engine B. V’engine C. Opposed engine D. Radial engine‘

76.How can identify a four strokeengine?

A. Valves B. Ports C. Cavities D. Passages

77. What is the working cycle of compression ignitionengine?

A. Dieselcycle B. Ottocycle C. Sterlingcycle D. Rankincycle

78. How the ports are opened and closed in two strokeengine?

A. Movement ofvalve B. Movement of Rockerarm C. Movement ofpiston D. Movement pistonpin

79. How many crank shaft rotation required to open exhaust valve one time in four stoke engine?

A. One B. Two C.Three D.Four

80. What is the volume of the space above the piston atTDC?

A. Sweptvolume B. Clearancevolume C. Totalvolume D. Displacevolume

81. How many times, ports are open in two rotation of crank shaft in two strokeengine?

A. Onetime B. Two times C. Three times D. four times

82.Where is the air fuel mixture compressed in the two stroke petrolengine?

A. Intake portB. Exhaust port C. Transfer port D. Combustion chamber

83. How many crank shaft rotations required to get one power in four stroke single cylinder dieselengine?

A. One B. Two C.Three D.Four

84. What is the angle of throw for 4 cylinder engine?

A. 60° B. 90° C. 120° D. 180°

85. Which is used to determine the stroke of an engine?

A. Cycle B. Throw C. Dia. ofpiston D. Length of connectingrod

86. How the set of operations performed in sequence of motion of the piston in an engine produce power iscalled?

A. Cycle B. Stroke C. Torque D. Efficiency

87. Which is the compression pressure ofC.I engine?

A. 90 to 160psi B. 180 to 280psi C. 290 to 390psi D. 400 to 550psi

88.Which is the engine called as constant volumecycle?

A. S.Iengine B. C.Iengine C. Turbineengine D. Steamengine

89.How can identify a two strokeengine?

A. Valves B. Ports C. Cavities D. Passages

90.What is the compression ratio of an engine, its clearance volume is 10 c.c and swept volume is 90c.c?

A. 8 :1 B. 9 :1 C. 10 :1 D. 11 :1

91. Which is the power developed in anengine?

A. BHP B. IHP C. FHP D. RHP

92. What is the stroke length of the engine if its throw of the crankshaft is 40mm?

A. 20 mm B.40 mm C. 60 mm D. 80 mm

93. Which is the starting system used in heavy vehicles?

A. Electric motorcranking B. Handcranking C. Gasoline engine cranking D. Compressed air cranking

94. Which engine has fuel injectionpump?

A. Petrol engine B. Diesel engine C. CRDI engine D. MPFIengine

95. Which engine hascarburetor?

A. Petrol B. Diesel C. Kerosene D. Mineraloil

96. What is the process of driving exhaust gases in two stroke engine out ofcylinder?

A. Combustion B. Supercharging C. Scavenging D. Intaking

97. Why suction tube in the tank is raised ½” above?

A. To enterair B. To avoid suction of water infuel

C. To enter condensed water D. To act atmospheric pressure

98. What is the purpose of valve in A/C fuel pump?

A. Creating suction B. Creating pressure

C. Supply correct quantity of fuel D. Allow the fuel to suck and deliver

99. Which causes the air enter into cylinder?

A. Airfiltering B. Engine vacuum C. AC fuel pump pressure D. Carburetor air-horn pressure

100.How the AC mechanical pump's fuel delivery pressure isdetermined?

A. Spring pressure on diaphragm B. Maximum stroke of diaphragm

C. Size of the pumpingchamber D. Maximum deflection ofdiaphragm

101.What is the purpose of needle valve in carburetor?

A. Decrease the fuelpressure B. Excess supply of fuel atidle

C. Always holds correct level offuel D. Controls the air flow of theengine

102.What is the purpose of throttle valve in the carburetor?

A. Filter thefuel B. Always holds correct offuel

C. Excess supply of fuel atidle D. Controls air fuel mixture into theengine

103.How many flywheel rotation requiresto complete one cycle in two strokeengine?

A. One B. Two C.Three D. Four

104.What isheat?

A. Torque B. Force C. Energy D. Velocity

105.What is indicated horse power?

A. Power developed in the cylinder B. Power developed in theflywheel

C. Power developed in the propellershaft D. Power developed in thewheel

106.What is brake horsepower?

A. Power available at flywheel B. Power available at the cylinder

C. Power available at the wheels D. Power available at the gearbox

107.What is the formula for Frictional horse power(FHP)?

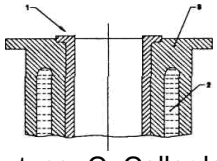
A. IHP – BHPB. IHP + BHP C. IHP / BHP D. BHP /IHP

ANSWERS: **ENGINE**

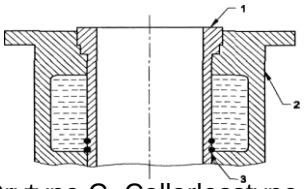
1.C	2.C	3.D	4.C	5.A	6.C	7.B	8.D	9.D	10.A	11.B	12.D	13.B	14.B	15.A
16.A	17.C	18.C	19.B	20.B	21.B	22.D	23.C	24.B	25.C	26.D	27.B	28.C	29.A	30.C
31.A	32.A	33.B	34.B	35.B	36.A	37.A	38.B	39.A	40.D	41.C	42.C	43.B	44.A	45.D
46.B	47.B	48.C	49.B	50.D	51.A	52.A	53.C	54.C	55.B	56.B	57.A	58.B	59.B	60.C
61.D	62.A	63.A	64.A	65.D	66.C	67.B	68.A	69.B	70.C	71.C	72.D	73.D	74.A	75.A
76.A	77.A	78.C	79.B	80.B	81.B	82.D	83.B	84.D	85.B	86.A	87.D	88.A	89.B	90.C
91.B	92.D	93.A	94.B	95.A	96.C	97.B	98.D	99.B	100. B	101. C	102. D	103. A	104.C	105. A
106.A	107. A													

ENGINE COMPONENTS

1. Material used for cylinder block is.....
A.castiron,B.brass,C. chromium,D. steel
2. Cylinder blocks are madeby.....
A. Fabrication,B. Casting,C. Forging,D. Dropforging
3. Select the instrument to check taper & ovality of cylinder bore.
A. Inside caliper, B. Micrometer, C. Bore gauge, D. Feeler gauge
4.When hard water is used in the cooling system, the water jackets in cylinder block are....
A. enlarged, B. scaled, C. overheated, D. overcooled
5. The wear and scores of cylinder parent bore can be reconditioned by.....
A. refacing machine, B. lapping machine, C. grinding machine, D. reboring machine
6. Honing is to be done after.....
A .lapping, B. grinding, C. reboring, D. refacing
7. Compression ratio for separate crank case mounted cylinder diesel engine is adjusted by shims.....
A .between cylinder block and crank case joint, B .at the bottom of inlet valve spring
C. between connecting rod and its cap, D. cylinder head and cylinder block.
8. Straight edge and feeler gauge is used to check warp of cylinder block. Which machine is used to remove warp?
A. Reboring machine, B. Refacing machine, C. honing machine, D. Surface grinding machine
9. Piston reciprocates in side the cylinder bore. Which equipment is used to enlarge the cylinder bore?
A. Cylinder ridge reamer, B. Cylinder bore gauge, C. Valve refacer, D. Cylinder reboring machine
10.Identify the cylinder liner type.

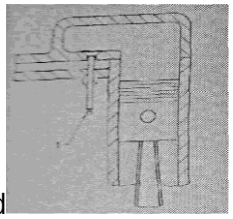


A. Wet type, B. Dry type ,C. Collar less type ,D. Press fit type
11. Identify the cylinder liner type.

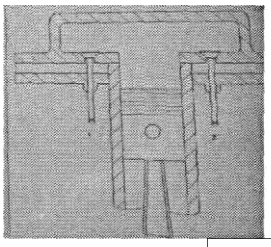


A. Wet type, B. Drytype,C. Collarlesstype,D. Floatingtype
12. Cylinder liners are filled into the cylinder block in a multi cylinder diesel engine.
What is the function of cylinder liner?
A. To protect block from rapid wear, B. To reduce weight of block
C. To increase life of piston, D.To increase life of piston ring
13. The fit of a dry liner in to the cylinder block is.....
A. Extreme fit,B. Interference fit, C. Sliding fit, D. Hand push fit in room temp

14.What is the special process commended by manufacturer to insert dry type liners in to the cylinder block?
A. Heat the block and cool the liner, B. Cool the block and heat the liner
C. Heat the block and hammer the liner, D. Cool the liner and hammer it to the block
15.The cylinder liners have to withstand high pressure, high temperature and wear and tear. So they are made of....
A. nickel steel, B. centrifugally casted cast iron, C. steel casted, D. semi steel casting
16.Identify the“ type of cylinder head” in the picture?

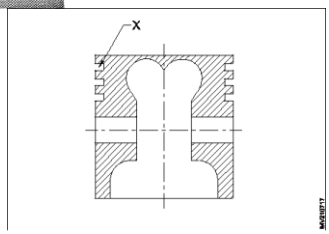


A` L head, B. I head, C. F head, D. T head
17. Identify the “type of cylinder head” in thepicture?



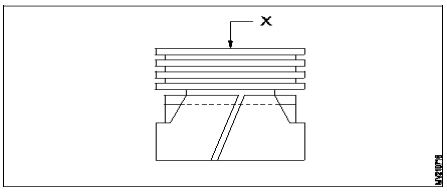
A. L head, B. I head, C. F head ,D. T head

18. What is the name of the part marked as ‘X’?



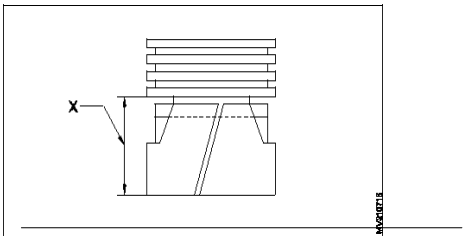
A. Ring land B. Gudgeon pin boss C. Ring grooves D. Crown

19. What is the name of the part marked as ‘X’?



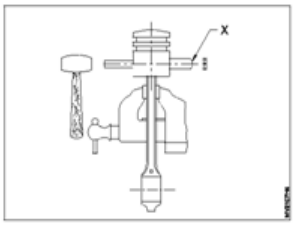
A. Face B. Crown C. Skirt D. Ring

20. What is the name of the part marked as‘ X’?



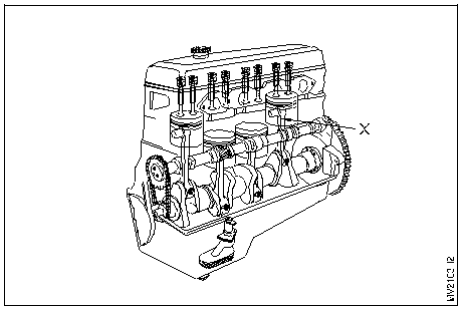
A. Skirt section B. Crown section C. Ring section D .Face section

21. What is the name of the part marked as ‘X’?



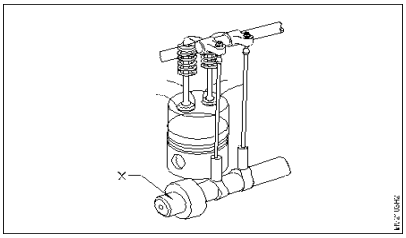
A. Cotter pin B .Piston pin
C. Spilt pin D. Crank pin

22. What is the name of the part marked as ‘x’?



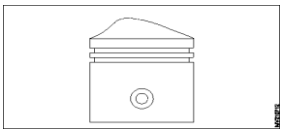
A. Piston B. Cam Shaft C. Crank Shaft D. Connecting rod

23. What is the name of the part marked as ‘x’?



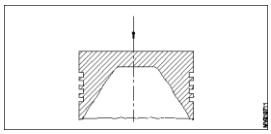
A. Cylinder head B. Engine block C. Connecting rod D. Cam shaft

24. What is the name of the piston head?



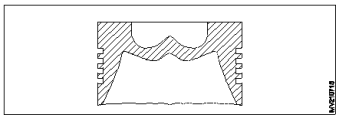
A. Flat head B. Domed head C. Concave head D .regulator head

25. What is the name of the piston head?



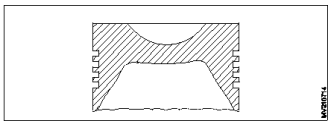
A. Flat head B. Domed head C.Concave head D.Irregular head

26. What is the name of the piston head?



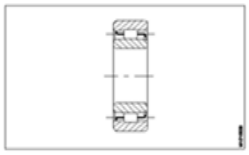
A. Flat head B. Domed head C. Concave head D. Irregular head

27.What is the name of the piston head?



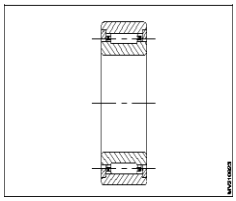
A. Flat head B. Domed head C. Concave head D. Irregular head

28. What is the name of the bearing?



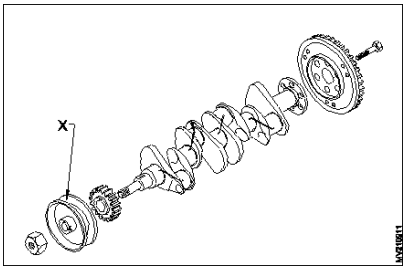
A. Ball bearing B.Roller bearing C.Needle bearing D.Tappet roller bearing

29. What is the name of the bearing?



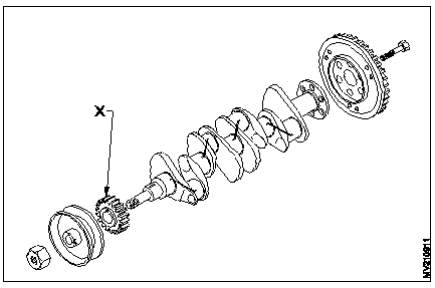
A. Ball bearing B.Roller bearing C.Needle bearing D.Tappet roller bearing

30. What is the name of the part marked as 'X'?



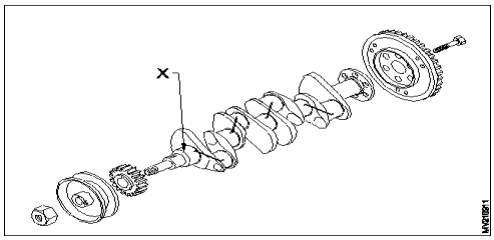
A. Drive socket B. Vibration dump C .Belt pulley D. Fly wheel

31. What is the name of the part marked as 'X'?



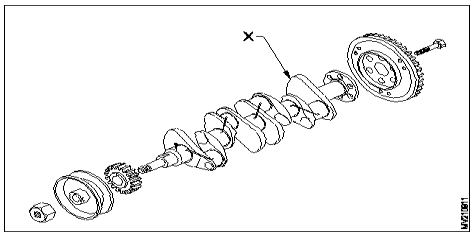
A. Drive sprocket B.Vibration damper C.Fan pulley D.Fly wheel

32. What is the name of the part marked as ‘X’?



A. Crank pin B.Crank arm C.Balancing weight D. Main journal

33. What is the name of the part marked as ‘X’?



A. Crank pin B.Crank arm C.Balancing weight D.Main journal

34. What is the name of the part marked as ‘X’?

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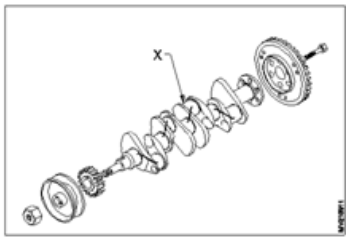
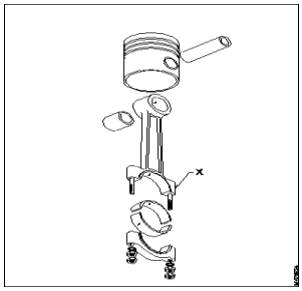


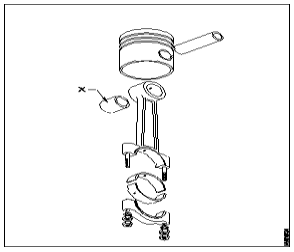
A. Crank pin B.Crank arm C.Balancing weight D.Main journal

35. What is the name of the part marked as ‘X’?



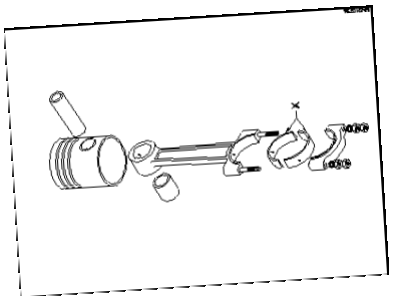
A. Oil passage B.Connection rod C.Big end D.Small end

36. What is the name of the part marked as ‘X’?



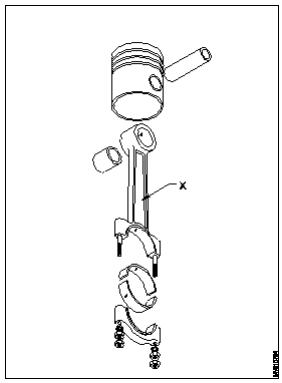
A. Bronze bush B.Bearing C.Big end D.Small end

37. What is the name of the part marked as ‘X’?



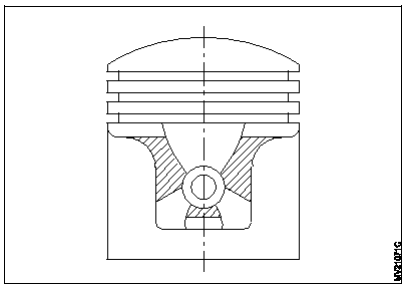
A. Piston pin B.Shell bearing C.Small end D.Big end

38. What is the name of the part marked as ‘X’?



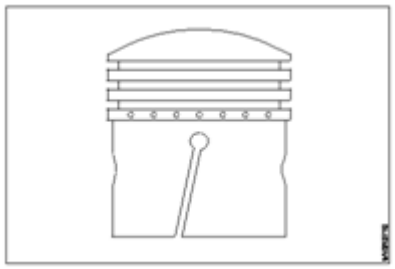
A. Connecting rod B.Gudgeon pin C.King pin D.Piston pin hole

39. What is the name of the piston?



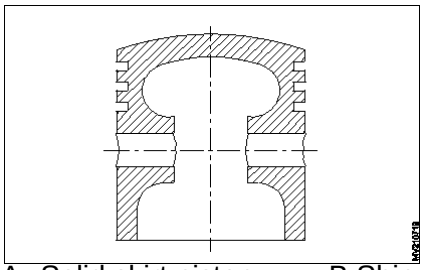
A. Solid skirt piston B.Supper pistonC.Split skirt piston D.Piston with steel alloy inserts

40.What is the name of the piston?



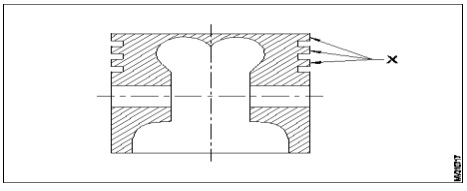
A. Solid skirt piston B.Supper pistonC.Split skirt piston D.Piston with steel alloy insert

41.What is the name of the piston?



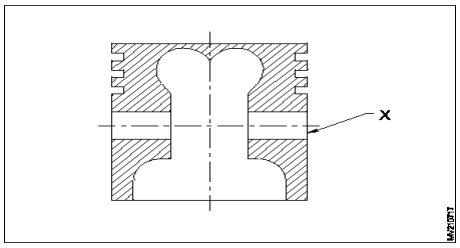
A. Solid skirt piston B.Shipper pistons C.Split skirt piston D.Piston with steel alloy inserts

42. What is the name of the part marked as ‘X’?



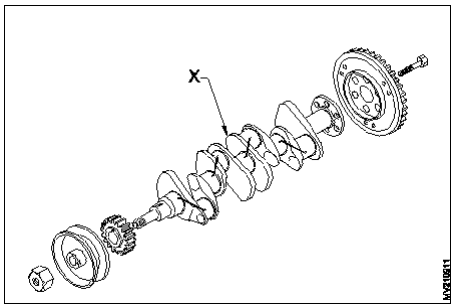
A. Gudgeon pin boss B. Ring land C. Ring grooves D. Crown

43. What is the name of the part marked as 'X'?



A. Gudgeon pin boss B.Ring land C.Ring grooves D.Crown

44. What is the name of the part marked as 'X'?



A. Crank pin B.Crank arm C.Balancing weight D.Main journal

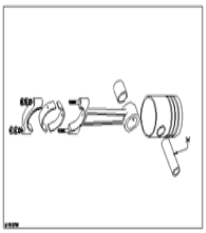
45. What is the material used to produce crank shaft?

A. Chromium vanadium nickel steel B.High speed steel C.Cast iron D.Wrought iron

46. What is the material of piston pins?

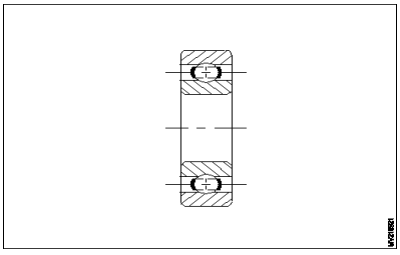
A. Nickel chromium steel B. Cast iron C.HSS D Bronze

47. What is the name of the part marked as 'X'?



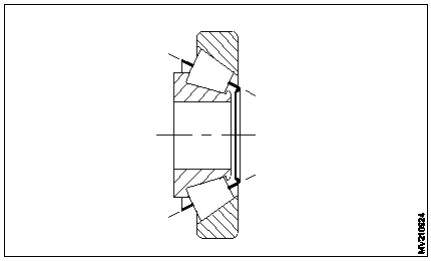
A. Gudgeon pin B. King pin C.Connecting rod D.Piston pin hole

48. What is the name of the bearing?



A. Ball bearing B. Roller bearing C. Needle bearing D. Tapper roller bearing

49. What is the name of the bearing?



A. Ball bearing B. Roller bearing C .Needle bearing D. Tapper roller bearing

50. What is the name the portion below thepiston boss?

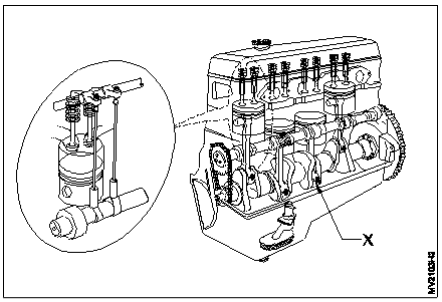
A. Land of the piston B.Ring section of the piston

C. Crown of the piston D.Skirt of the piston

51. What type of bearing fitted in the connectingrod big end?

A. Needle bearing B.Ball bearing C.Taper roller bearing D.Shell bearing

52. What is the name of the part marked 'x'?



A. Connecting rod B.Cam shaft C.Crank shaft D.Rocker arm

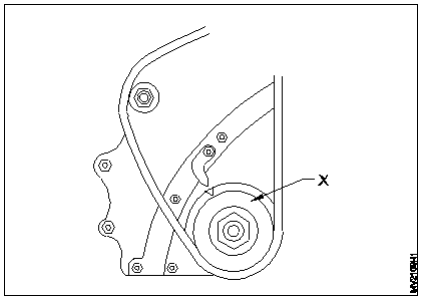
53. Which part connect the piston with connecting rod?

A. Piston pin B.Spilt pin C.Crank pin D.Cotter pin

54. Which part is connect the piston with crank pin?

A. Push rod B.Connecting rod C.Cam Shaft D.Crank Shaft

55. What is the name of part marked as 'X'?



A. Alternator pulley B.Water pump pulley C.Crank shaft pulley D.Dynamo pulley

56.Which tool used to remove the crank shaft pully?

A. Double and spanner B.Ring spanner C.Pipe wrench D.Puller

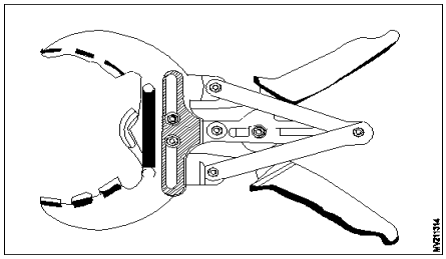
57. Which tool is used to measure the diameter of the crank shaft main journal?

A. Inside micrometer B.Outside micrometer
C. Three point internal micrometer D.Master ring gauge

58. What is the material for cam shaft?

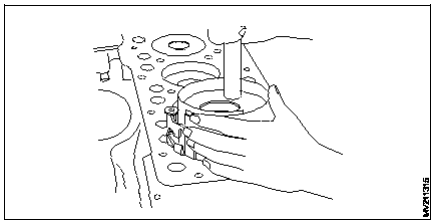
A.Forged alloy steel B.Copper alloy C.Aluminium alloy D.Zinc alloy

59. What is the name of the tool?



A. Torque wrench B. Piston ring compressor C. Piston ring expander D. Circlip player

60. What is the name of the tool?



A. Torque wrench B. Piston ring expander C. Piston ring compressor D.Circlip player

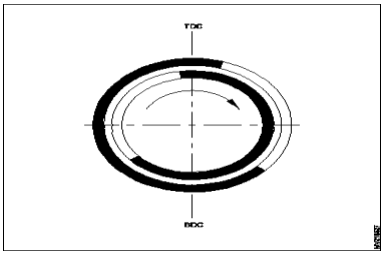
61. Which tool is required to remove the valves?

A. Torque wrench B. Valve spring lifter C. Box spanner D. Scraper

62. Which instrument is used to check thevacuum of the cylinder?

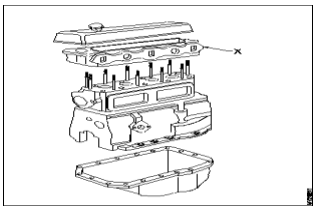
A. Compression gauge B.Dial gauge C.Vacuum gauge D.Wire gauge

63 What is the name of the diagram?



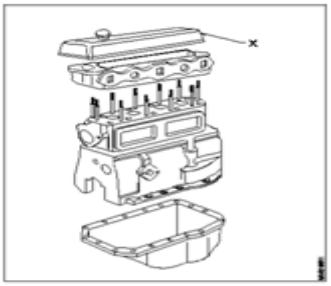
A. Injection timing B.Port timing C.Valve timing D.Ignition timing

64. What is the name of the part marked as 'X'?



A.Valve door cover B.Cylinder head C.Engine block D.Oil pan

65.What is the name of the part marked as 'X'?



A. Valve door cover B.Cylinder head C.Engine block D.Oil pan

66. Which measuring instrument used to checkthe fly wheel face out?

A. Dial indicator B.Compression gauge C.Outside micrometer D.Feeler gauge

67. Which is the most preferred use of taper roller bearings?

A. Gear boxes B.Fly wheel and water pump

C. Differential and wheel hub D.Connecting rods

68. What is the property of a bearing helps to with stand metal to metal contact?

A. Surface action B.Thermal conductivity C.Fatigue strength D.Embeddability

69. Which is the most preferred use of roller bearings?

A. Gear boxes B.Fly wheel C.Differential D.Connecting rods

70. Which is connected with piston through piston pin?

A. Gudgeon pin B.Connecting rod C.Cam shaft D.Rocker arm

71. Which is the key element in converting reciprocating motion in to rotary motion?

A. Connecting rod B.Gudgeon pin C.King pin D. Cam shaft

72. Which is transferring energy for the piston to crankshaft?

A. Gudgeon pin B.King pin C.Connecting rod D.Cam shaft

73. Which is the load taken by the roller bearing?

A. Radial load B.Axial load C.Thrust load D.Radial and axial load

74. What is the load taken by taper rollerbearing?

A. Radial load B.Axial and radial load C.Thrust load D.Radial and axial load

75. Which is the bearing used in differential and wheel of a heavy vehicles?

A. Ball bearing B.Roller bearing C.Needle bearing D.Taper roller bearing

76.. Which is the bearing used in water pump?

A.Ball bearing B.Roller bearing C.Needle bearing D.Taper roller bearing

77. Which is the bearing used in gear boxes?

A.Ball bearing B.Roller bearing C.Needle bearing D.Taper roller bearing

78. Which is the most preferred use of bush bearings?

A. Connecting rods B.Fly wheel C.Crank shaft D.Oil pumps

79. Where the compression ring is fitted in the piston?

A. Compression ring above the oil ring in the piston B. Compression ring bottom of the piston skirt

C. Compression ring between oil ring and piston D. Compression ring between piston pin and bottom of skirt

80. Which tool is used to remove the piston ring?

A. Drift punch B. Ring expander C. Circlip plier D. C' clamp

81.'What is the purpose of the timing chain?

A.To connect water pump pulley B .To connect alternator

C.To connect crank or cam shaft gear D.Toconnect A/C compressor

82. What is the purpose of the fly wheel timing mark?

A. To coincide the gears B.To set the engine timing

C. To set the F.I.P timing D.To set the valve clearance

83. Where the fly wheel is fitted in the engine?

A.Cam shaft B.Crank shaft C.Rocker arm shaft D.Primary shaft

84. What is the speed ratio cam shaft to crank shaft?

A. Half B.Equal C.Double D.Triple

85 .When it is required to coincide the mark with timing gears?

A. During assembling water pump B.During assembling oil pump

C. During assembling cam shaft D.During assembling radiator

86. Which instrument is used to check the tappet clearance?

A. Telescopic gauge B.Screw pitch gauge C.Feeler gauge D.Wire gauge

87. Which gauge used to measure the cylinderbore wearness?

A. Compression gauge B.Vacuum gauge C.Dial gauge D.Depth gauge

88. What is the property allows a bearing to with stand impact load for a reasonable time?

A. Fatigue strength B.Tensile strength C.Toughness D.Hardness

89. What is the property of bearing helps to absorb dirt and metal particles?

A. Conformability B.Embedability C.Surface action D.Thermal conductivity

90. What is the cause of excessive loading?

A.Fatigue failure B.Bearing spread C.Bearing crush D.Bearing struck

91. What is the cause for uneven wear of bearings?

A. Bend twist B.Excessive lubrication C.No lubrication D.Over heat

92. What is ovality of a crank shaft?

A. Difference in dia. measured from top to bottom of a crank shaft outer dia.

B. Difference in dia. measured thrust to non thrust across dia.

C. Difference in dia. measured only at top

D. Difference in dia. measured only at bottom

93. What is the type of hardening done on crank shaft?

A. Induction hardening B.Case hardening C.Surface hardening D.Curve hardening

94. What is ovality of a bore?

A. Difference in dia. measured top to bottom

B. Difference in dia. thrust to non thrust side of cylinder

C. Difference in dia. measured only at top

D. Difference in dia. measured only at bottom.

95. What is the effect of tapper and ovality of a bore?

A. Compression loss B.Miss firing C.Difficult starting D.False valve timing

96. What is the material of cylinder block?

A.Cast iron B.Bronze C Brass D.Zinc alloy

97. What is the reason for corrosion of bearing?

A.Less clearance B.Water mixed with lubricant C.Over loaded D. over heated

ANSWER: **ENGINE COMPONENTS**

1.A	2.B	3.C	4.B	5.D	6.C	7.A	8.D	9.D	10.B	11.A	12.A	13.B	14.A	15.B
16.A	17.D	18.C	19.B	20.A	21.B	22.A	23.D	24.B	25.A	26.D	27.C	28.B	29.C	30.C
31.A	32.D	33.C	34.A	35.C	36.A	37.B	38.A	39.D	40.C	41.A	42.B	43.A	44.B	45.A
46.A	47.A	48.A	49.D	50.D	51.D	52.C	53.A	54.B	55.C	56.D	57.B	58.A	59.C	60.C
61.B	62.C	63.C	64.B	65.A	66.A	67.C	68.A	69.A	70.B	71.A	72.C	73.A	74.B	75.D
76.A	77.A	78.B	79.A	80.B	81C	82.B	83.B	84.A	85.C .	86.C	87.C	88.A	89.B	90.A
91.A	92.B	93.A	94.B	95.A	96.A	97.B								

COOLING SYSTEM & LUBRICATION SYSTEM

1.If thethermostat valve remain closed, then.....

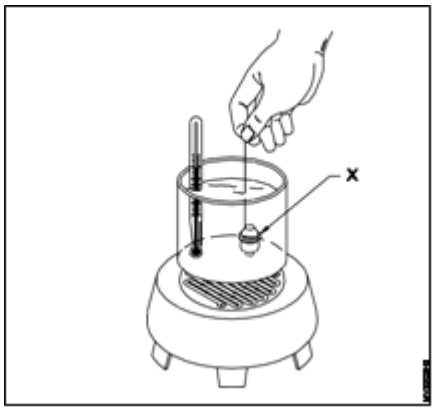
A. engine will overheat, B. rough idling, C. engine will warm up slowly, D. starting will be difficult.

24.Which oil is used in coolingsystem?

A. Lubricant oil B. Mineral oil C. Coolant oil D. Hydraulic oil

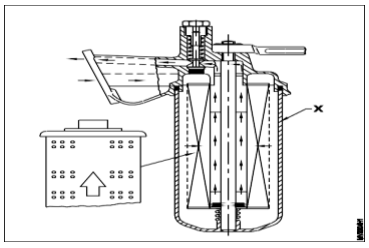
25.What is the name of testing marked as'X'?

A. Thermometer testing B. Thermostat valve testing



C. Water pumptesting D. Impellertesting

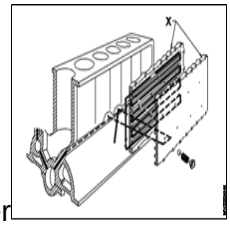
26. What is the name of part marked as'x'?



A. Oil filterbowl B. Fuel filter bowl

C. Water filter bowl D. Air filterbowl

27. What is the name of part marked as'x'?



A. Air cooler B. Inter cooler C. Radiator D.Oilcooler

28. Which one is the properties oflubricant

A. Boiling temperature should below

B. Should developfoam

- -

C. Oil viscosity should not be same in hot and coldcondition

D. Oil viscosity should be suit the operating conditions

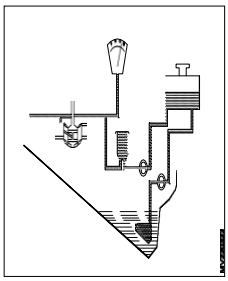
29. Which part drives the oilpump?

A. Crank Shaft B. Cam Shaft C. Crankpulley D. Timinggears

30. Which part is lubricated by splash lubricationsystem?

A. Timing gears B. Main journal C. Crankpin D. Cylinderwall

31. What is the name of lubricationsystem?



A. Wet sump lubrication system B. Dry sump lubrication system

C. Petrol - oil lubrication system D. Splash lubrication system

32. How oil deliver from the crank shaft main bearings to connecting rodbearings?

A. Through drilled oilpassages B. Through crankpulley C.Throughsprocket D.Through vibrationdamper

33.What is the purpose of a radiator pressure cap?

A. Release the excess pressure B. Maintain the water temperature

C. Retain the vacuumpressureD. Retain the atmosphericpressure

34. What is the purpose of water pump in coolingsystem?

A. Force the watercirculation B. Reduce the waterpressure

C. Increase the watertemperature D. Flushing out the coolingsystem

35. Which part is used to pump the water in waterpump?

A. Bearing B. Shaft C. Pulley D. Impeller

36. What is the effect if thermostat valve is struck?

A .Engine gets over cooling B. Engine gets over heating C. Engine does notstartD. Engine does notstop

37. Where heat dissipation take place in cooling system?

A. Radiator B. Water pump C. Water jackets D. Fan

38.Which type of pump is used in water cooling system?

A. Gearpump B. Diaphragmpump C. Centrifugalpump D. Reciprocatingpump

39. How many valves are used in radiatorcap?

A. Onevalve B. Two valves C. Three valves D. Fourvalves

40. Which part allows to flow water from upper tank to lower tank of theradiator?

A. Fins B. Core tubes C. Water pump D.Bottomhole

41. What is the purpose of the radiator in the coolingsystem?

A. Cool the hotair B. Cool the hotoil C. Cool the hotwater D. Cool the waterpump

42. What is the purpose of metal fins in air coolingsystem?

A. Supply the heat B. Increase the heatC .Reduce the heat D. Maintain theheat

43. Where the metal fins are provided in the air cooledengine?

A. Cylinder andhead B. Exhaustpipe C. Valvedoor D. Intakemanifold

44. Which types of cooling system the rate of cooling is verylow?

A. Thermo siphonsystem. B. Air coolingsystem C. Forced feedsystem D. Pump circulationsystem

45. How the water pump get drive in pump circulation coolingsystem?

A. Bybelt B. Bygear C.Bychain D.Bycoupling

46. Which mixture is used in radiator reverse flushingcleaning?

A. Flushing water with air (gun) pressure B. Flushing water with engine oil

C. Flushing water with coolant oil D. Flushing water with soapoil

47. When the thermostat valve open inengine?

A. Low temperature ofengine B. High temperature ofengine

C. Operating temperature ofengine D. Freezing temperature ofengine

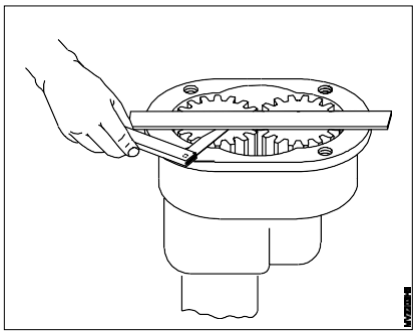
48. Which part helps to increase the water boiling point in water coolingsystem?

A. Radiator coretubes B. Radiator fins C. Radiator hose D. Radiatorcap

49. Which engine is used the Petrol oil lubricationsystem?

A. Four stroke engineB. Two stroke engine C. SteamengineD. Battery car

50.What is the name ofchecking?



A.Surface checking B.Back lash checking

C.DepthcheckingD.Radial clearancechecking

51. What is the purpose of the dip stick used in theengine?

A. To check oilpressure B. To check oiltemperature C.To check oildensity D.To check oillevel

52. Which lubrication system is used separate oiltank?

A. Wet sumplubrication B. Splashlubrication

C. Petrol - oillubrication D. Dry sumplubrication

53. Which type of lubrication system is used in two strokeengine?

A. Dry sump lubrication B. Wet sump lubrication C. Petrol-oil lubrication D. Splashlubrication

54. What is the main purpose of thelubricant?

A. Minimize thefriction B. Increase thefriction

C. increase thewearness D. Increase thenoise

55. Which system the gear type oil pump is used?

A. Lubricationsystem B. Coolingsystem C. Fuelsystem D. Air conditioningsystem

56. What is the cause of water leakage in water pump?

A. Worn outbearing B. Worn outshaft C. Worn outseal D. Worn outimpeller

57. When it is required to change the water pumpbearing?

A. Waterleakage B. Bearingnoisy C. Low waterpressure D. Fan beltloose

58. What is the effect if the radiator cores are clogged?

A. Free coolant flow B. Slow coolant flow C. Stop coolantflow D. Increase coolantflow

59. What is the reason pump does not suck the oil?

A. Less radialclearance B. Morebacklash C .Relief valvestruck D. Filterclogged

60. What is the purpose of water pump by-pass hole in the engine cooling system?

A. To prevent air pockets in the pump housing

B. To prevent collapsing of radiator hoses

C. To allow coolants to flow within the engine while thermostat is closed

D. No purpose is served by this by-pass hole

61. Which of the following is not a component in the cooling system?

A. Radiator,B. Water Pump, C. Pressure cap, D. Air compressor

62. A radiator pressure cap contains 2 valves. What are they?

A. Atmospheric valve & vacuum valve, B. Pressure relief valve & vacuum valve

C .lnlet valve & exhaust valve, D. Over flow valve & air valve

63. The boiling temperature of the coolant in the cooling system is increased by the use of....'..

A. Water jackets, B. Vacuum valve only, C. Pressure type radiator cap, D. Aluminium radiator

64. The main purpose of pressure radiator cap is to.....

A. Pressurise the system ,B. increase air water circulation

C. Help to develop vacuum in the system, D. Avoid build-up of pressure

65. What could be the reason of overheating of the engine identify.

A. Lack of coolant (water) in the cooling system, B. Slow acceleration of engine

C. High compression pressure, D. Engine oil viscosity too high

66. Which one could contribute to engine overheating?

A. Clogged radiator core, B. Low idle speed,

C. Excessive tappet clearance, D. Lub oil pressure too high

67. What is the main function of a thermostat in cooling system?

A. To increase boiling point of water, B. To bring the cold engine to operating temperature quickly

C. To prevent water loss, D. To prevent clogging of radiator

68. Between which two parts the thermostat is located in the cooling system?
A. Between radiator bottom tank and water pump inlet
B. Between radiator top tank and bottom tank
C. Between cylinder head and radiator top tank
D. Between cooling fan and water pump
69. The viscosity measured by--------
A. fathometer B.lactometer C.viscometer D.none of these
70. Friction is ------ when pressure is low.
A. Low B. High C. Same D. none of these
71.In gear type oil pump the number of gears are------
A. 4 B. 2 C. 3 D. 5

ANSWERS; **COOLING SYSTEM& LUBRICATION SYSTEM**

1.A	2.A	3.B	4.D	5.A	6.A	7.A	8.D	9.B	10.B	11.C	12.C	13.A	14.C	15.D
16.D	17.B	18.C	19.A	20.A	21.B	22.C	23.B	24.C	25.B	26.A	27.A	28.D	29.B	30.D
31.B	32.A	33.A	34.A	35.D	36.B	37.A	38.C	39.B	40.B	41.C	42.C	43.A	44.A	45.A
46.A	47.C	48.D	49.B	50.C	51.D	52.D	53.C	54.A	55.A	56.C	57.B	58.C	59.B	60.C
61.D	62.B	63.C	64.A	65.A	66.A	67.B	68.C	69.C	70.A	71.B				

INTAKE AND EXHAUST SYSTEM

1. Which part connects the petrol engineinlet manifold?

A. Airfilter B. Injector C. Carburetor D. Fuelpump

2. What is the material of inletmanifold?

A. Brass B. Bronze C. Stainlesssteel D. Aluminiumalloy

3. Which component is related to exhaust system?

A. Muffler B. Airfilter C. Carburetor D. Injectionpump

4. Which is related to pneumaticsystem?

A. Steam B. Electric C. Compressedair D. Pressurizedwater

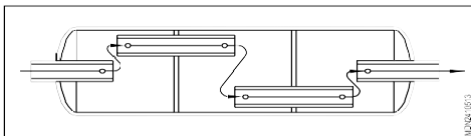
5. Where is the turbochargermounted?

A. Airfilter B. Inletmanifold C. Cylinderhead D. Exhaustmanifold

6. What is the material of exhaustmanifold?

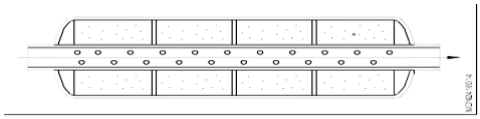
A. Brass B. Bronze C. Castiron D. Steelalloy

7.Name the type ofmuffler.



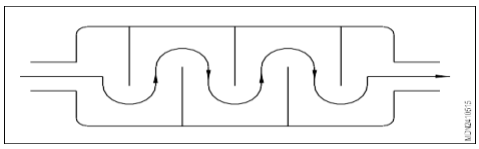
A. Baffletype B. Resonancetype C. Reverse flowtype D. Straight throughtype

8. Name the type ofmuffler.



A. Baffletype B. Resonancetype C. Reverse flowtype D. Straight throughtype

9. Name the type ofmuffler.



A. Baffletype B. Resonancetype C. Reverse flowtype D. Straight throughtype

10. Which type of muffler produces antinoise without restricting exhaustflow?

A. Baffletype B. Electronictype C. Reverse flowtype D. Straight throughtype

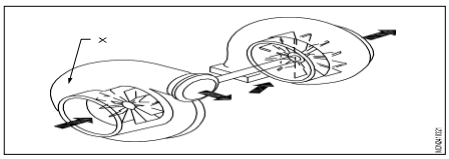
11. Which type of muffler is fitted with sensors and microphone?

A. Electronictype B .Resonancetype C. Reverse flowtype D. Straight throughtype

12. Which process is taken place in catalytic convertor?

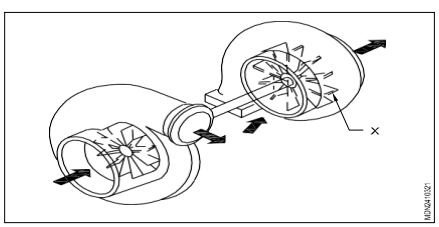
A. Thermal B. Physical C. Chemical D. Biological

13.What is the name of part marked as‘X’?



A. Turbine wheel B. Turbine housing C. Compressor wheel D. Compressor housing

14.What is the name of part marked as‘X’?



A.Turbine wheel B. Turbine housing C. Compressor wheel D. Compressor housing

15. What is the purpose of the turbocharger?

A. Savepower B. Scavenging C. Filter the exhaustgas D. Pump more air into thecylinder

16.How does a turbocharger getdrive?

A. Bybelt B. Bygear C.By inletgas D. By exhaustgas

17.Which one of the following acts as a flame arrester during engine backfire?

A. Muffler B. Oilfilter C. Airfilter D. Fuelfilter

18. Which type of filter element is fitted in dry type aircleaner?

A. Cloth B. Paper C. Strainer D. Wiremesh

19. What is the purpose of the muffler in the exhaustsystem?

A. To reduce theheat B. To reduce the noise C.To reduce the vibration D.To filter the exhaustgases

20. Where the exhaust system muffler is connected?

A. Between exhaust pipe and tailpipe B. Between tail pipe and exhaustmanifold

C. Between engine head and exhaustmanifold D. Between exhaust pipe and exhaustmanifold

21. Where the catalytic converters areused?

A. Fuelsystem B. Inletsystem C. Exhaustsystem D. Lubricationsystem

22. What is the purpose of catalyticconverter?

A. Control thenoise B. Control theemission C. Control thetemperature D. Control the fuelconsumption

23.Where the catalytic converter isfitted?

A. Between muffler and tailpipe B. Between exhaust pipe andmuffler

C. Between tail pipe and resonatorpipe D. Between engine head and exhaustmanifold

24.Which are the materials commonly used in the catalyticconverter?

A. Zinc and molybdenum B. Palladium and platinum C. Asbestos andceramics D. Chromium andvanadium

25. What is the reason to decrease the volumetric efficiency in exhaustsystem?

A. Lownoise B. Hightemperature C. Lowtemperature D. Excessive backpressure

26.Which metal in the fuel is to be avoided while fitting catalyticconvertor?

A. Tin B. Lead C. Chromium D. Phosphorus

28. Where safety cartridge is located in the air intake system?

A. Inside inlet manifold, B. Inside turbo charger

C. Inside air cleaner filter, D. Above inlet manifold

29. In a dry air cleaner, which part cleans the fine dusts or impurities?

A. Safety cartridge,B. Paper element filter, C.Pre cleaner, D.Dust unloader

30. Where the vacuum produced by exhausterused?

A. Governor of FIP, B. Wheel cylinder, C. Self starter, D. Inletmanifold

31. What is type of muffler ?

A. baffles B. resonance C. wave cancellation D. all of these

32. Chamber muffler is another name of which muffler?

A. electronic B. reactive C. absorptive D. none of these

33. What is the maximum temperature that a metallic ceramic coating can withstand?

A. 1100 degree C B. 1000 degree C C. 10000 degree C D. 11000 degree C

34. Which of the following can increase or decrease the speed of a reaction without participating In the reaction ?

A.Muffler B. converter C. back pressure D. oxidative

35. Which of the following is used for the mixture of a wash coat ?

A. Aluminium oxide B. titanium oxide C. silicon oxide D. all of these

36. In petrol engine, the gas which doesn't burn and passes out without transformation is……

A. oxygen B. carbon dioxide C. carbon monoxide D. nitrogen

37. The main function of intake manifold is to----------

A. reduce intake noise B. provided the mixture of air and fuel

C. distribute intake air equally to the cylinder

D. cools the intake air to a suitable temperature

38. Fuel consumption with increase in back pressure will……..

A. increase B. decrease C. depend on the factor D. remain unaffected

39. The device used to reduce exhaust noise is called……

A. muffler B. exhaust pipe C. exhaust manifold D. tail pipe

40. Oxygen sensor is mounted on ……..

A. exhaust manifold B. intake manifold C. both D. none of these.

41. The colour of exhaust from diesel engine is generally…..

A. white B. bluish C. black D. violet

ANSWERS: **INTAKE AND EXHAUST SYSTEM**

1.C	2.D	3.A	4.C	5.D	6.C	7.C	8.D	9.A	10.B	11.A	12.C	13.D	14.A	15.D
16.D	17.C	18.B	19.B	20.A	21.C	22.B	23.B	24.B	25.D	26.A	27.A	28.C	29.B	30.A
31.D	32.B	33.A	34.B	35.D	36.D	37.C	38.A	39.A	40.A	41.C				

FUEL SUPPLY SYSTEM

1 .How much pressure the CRDI- diesel engine pump develop?

A.100 - 200bar B. 200 - 600bar C. 600 - 1000bar D. 1000 - 1600bar

2. Where is fuel injectorfitted?

A. Cylinder head B. Cylinder block C. HeadcoverD. Crankcase

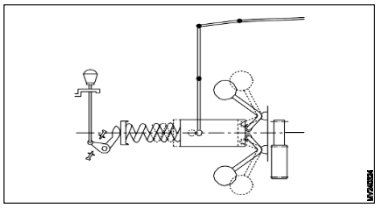
3. Which electronic device controls the engine system?

A. Regulator B. Ecm C. Fuse D. Switch

4. How many fuel chamber's are in HEUI?

A. One B. Two C.Three D.Four

5. What is the type ofgovernor?



A. Servogovernor B. Hydraulic governor C. Pneumatic governor D. Mechanicalgovernor

6. Which part connected in between inlet manifold and low pressure chamber of pneumaticgovernor?

A. Accelerator cable B. Vacuum tube C. Stop levercable D. Throttle lever

7. How the quantity of fuel delivery vary in a running dieselengine?

A. Byplunger B. By control sleeve C. By control rack D. Byinjection

8. Where the fuel feed pump of a diesel engine usually mounted?

A. FuelFilter B. Fuelgallery C. Fuelinjector D. Fuel injectionpump

9. Which typeof engine has common rail direct fuel injectionsystem?

A. Steam engine B. Diesel engine C. Turbine engine D. Wankle engine

10.How the CRDI injectors pressure control valve operated?

A. Mechanically B. Electronically C.ManuallyD .Hydraulic

11. Where is the pressure discharge valve is fitted in CRDI fuelsystem?

A. Commonrail B. Fuelpump C. Injectors D. Fuelfilter

12. Which is develop diesel pressure in the CRDIengine

A. ECM B. Injection C. Fueltank D. High pressurepump

13. What is the function of heaterplug?

A. Warm up fuelpump B. Warm up combustionchamber C. Warm upinjector D. Warm upvalves

14. Which is leak proof between nozzle and nozzle body?

A. Increase the power B. Prevent dirty smoke C. EasystartingD. Mirror polishing finish in nozzle andbody

15. How much maximum fuel pressure developed in fuel injectionpump?

A.100 to 200Kgf/cm^2 B. 200 to 300Kgf/cm^2 C. 300 to 400Kgf/cm^2 D. 400 to 700Kgf/cm^2

16. Which governor has fitted the control rack withdiaphragm?

A. Mechanical governor B. Pneumatic governor C. ServogovernorD. Centrifugalgovernor

17. Which fuel related with cetane number?

A.Petrol B. Diesel C. Coal D. Kerosene

18. Which is the process of fuel bleeding system?

A. Burn theair B. Pump theair C. Remove theair D. Pressurize theair

19. Where is the delivery pipe of fuel feed pump connected?

A. Fueltank B. Fuelfilter C. Fuelgallery D. Fuel injectionpump

20. When do we use the hand primingpump?

A. Engine is atrest B. Engine is at full load C. Engine is at full speed D. Engine is at idling speed

21.Which valve is maintaining in the high pressure FIP pipeline?

A. Control rack B. Delivery valve C. Barrel D. Plunger

22. What is the purpose of baffles in the fuel tank?

A. To minimize the slushing of fuel in the tank B. To strengthen the fueltank

C. To make chambers in the fuel tank D. To make square and lengthy fueltank

23. What is the defects of air lock in the fuel system?

A. Hard running of theengine B. erratic running of theengine

C. Smooth running of theengine D. Continuous running of theengine

24.Which action the spindle only move up and down in feedpump?

A. Idling action B. Partial action C. NormalactionD. pumpingaction

25. The more sulphur content in a fuel forms sulphur ousacid during burning with engine oil and effects...

A. cylinderblock,B. bimetalbearings,C. crankpins,D. mainjournals

26. The burning quality of the gasoline is measured byits.....

A. octanenumber,B. volatility, C. viscosity, D. sulphurcontent

27. Which of the following is a part of fuel feed system?

A. fuel tank B. fuel filter C. fuel gauge D. all of these

28. Diesel ---------- compared to petrol.

A. more flammable B. burns with difficulty C. burns easily D. none of these

29. A hand priming device can pump fuel from the following…

A. sump B. fuel tank C. fuel injection pump D. oil tank

30. Sulphur content in diesel should not be more than …..

A. 0.10% B. 1% C. 0.001% D. 5%

31. The least flash point of diesel is ……..

A. 50 degree F B. 75 degree F C. 100 degree F D. 150 degree F

32. Injection pressure in a diesel engine is about…….

A. 10 bar B. 100 bar C. 150 bar D. 500 bar

33. An irregularity of diesel supply can cause ….

A. air lock B. dirty filter C. air in fuel supply D. all of these

34. Which type of governer uses a diaphragm ?

A. hydraulic B. pneumatic C. mechanical D. none of these

35. A ---------- is fitted with the pneumatic governor in the inlet manifold.

A. nozzle B. plunger C. butterfly d. spring

36. Which part is not common between petrol and diesel engine ?

A. air cleaner B. exhaust silencer C. fuel injector D. Battery

37. Mechanical fuel pump is operated by……

A. inlet valve B. cam C. connecting rod D. crankshaft

38. During the suction stroke of a diesel engine-----

A. petrol injected B. diesel injected C. diesel & air supplied D. only air supplied

39. Injection pressure in a diesel engine is about……..

A.10 bar B. 100 bar C. 150 bar 500 bar

40. The ignition quality of diesel is expressed by…….

A. calorific value B. octane number C. cetane number D. none of these

ANSWERS:**FUEL SUPPLY SYSTEM**

1.D	2.A	3.B	4.B	5.D	6.B	7.C	8.D	9.B	10.B	11.A	12.D	13.B	14.D	15.D
16.B	17.A	18.C	19.B	20.A	21.B	22.A	23.B	24.A	25.B	26.A	27.D	28.B	29.B	30.B
31.D	32.B	33.D	34.B	35.C	36.C	37.A	38.D	39.B	40.C					

MARINE & STATIONARY ENGINE

1.The modern era comprise of-
A. Cycles B. Machines C. Crafts D.None of these
2. What is the speciality of diesel engine as a fuel?
A. High compression ratio B. High thermal efficiency C. Both (a) and (b) D. None of these
3. In a double acting engine, the combustion gas works on the corners of the double crowned piston in----- Sequence.
A. Alternate B. Simultaneous C. series D. all of these
4. The pistons of an opposed piston engine are-----
A. in the same direction B. aligned C. in the center D.in opposite directions
5. Which crankshaft does an opposed piston engine have?
A. Upper crankshaft B. Lower crankshaft C. Vehicle crankshaft D. Both (a) and (b)
6. Which crankshafts consecutively control the operation of intake and exhaust of an opposed piston engine?
A. Lower, upper B.Both upper crankshaft C. Upper, lower D.Both lower crankshaft
7. Which is better amongst opposed piston and single acting engine?
A. Single acting B. Opposed piston C. Both (a) and (b) D. None of these
8. Diesel engines are mostly used in marine engine because-
A. of high working speed B. it has a simple form
C. it has high thermal efficiency D. none of these
9. What causes the transmission of electromagnetic properties in an electromagnetic coupling?
A. Resistor B. Capacitor C. Inductor D.diode
10. Electromagnetic couplings are used in which electrical equipment ?
A. d.c.B. a c. C. Both (A) and (B) D. None of these
11. The law of electromagnetic couple is known by which name ?
A. Magnetic Law B. Henry's Law C. Faraday's Law D. Induction Law
12. the value of electromagnetic coupling depends on which wiring of a transformer ?
A. Primary B. Secondary C. Both (A) and(B) D. None of these
13. what is the nature of electromagnetic radiation ?
A. Electrical B. Magnetic C. Both (A) and (B) D. None of these
14. which of the following engine has combustion process on both sides of the piston in only one cylinder ?
A. Double acting engine B. Opposed piston engine C. Both (A) and (B) D. None of these
15. which lubrication system is used in marine engines ?
A. excellent lubrication system B. Forced lubrication system
C. Wet lubrication system D. All of these
16. water in the water jackets of the cooling system of marine engine is continuously cooled by which water?
A. Sea ice B. Sea water C. Sea air D. All of these
17. Magnetic poles of same nature ----- each other.
A. attract B. repulse C. have no effect D. first attract then repulse
18. ----- is the coupling that produces magnetism in another circuit when current flows through one circuit
A. Electric coupling B. Magnetic coupling C. Electromagnetic coupling D. All of these
19. how are the magnetic and electric field of an electromagnetic coupling related ?
A. Inversely proportional B. proportional C. Unaffected D.Equal
20. which of the following depends upon the principle of an electromagnetic coupling ?
A. Relay B. Transformer C. Modern motor D. All of these
21. what is the system that controls the speed of an electrical machine ?
A. Faraday's Law B.Electrical Drive C. Magnetic Drive D. Electromagnetic Drive
22. how is a drive used in gas and steam turbines ?
A. prime mover B.Reciprocating mover C.Electromagnetic coupling D.Piston engine
23.A driver can be divided into how many oats on the basis of design ?
A.2 B.3 C.4 D.5
24. Opposed piston engine has_____number of crankshafts.
A.One B.Two C.Three D.More than three
25. How is reduction carried out in a worn drive ?
A.By gear ratio B. By angularity C.Both (a) and (b) D.None of these
26.Swirl is produced in how many levels?
A.one B.Two C. Oil filter D. All of these
27. Up-assembly includes-
A. Generator B. Starter motor C. Oil Filter D. All of these

28.The number of cylinders in a diesel engine (Cummins ISB 2007) are-
A.4 B.5 C.6 D.None of these
29. In which type of engine better balancing and more uniform torque is obtained?
A.Opposed engine B.'V' engine C.Radial engine D.In-line engine
30.Marine torque are_____
A.Air Cooled B.Water cooled C.Oil cooled D.Fored convention cooled

ANSWERS: MARINE & STATIONARY ENGINE

1.B	2.C	3.A	4.D	5.D	6.C	7.B	8.C	9.C	10.B	11.C	12.A	13.C	14.B	15.B
16.B	17.B	18.B	19.B	20.D	21.B	22.A	23.B	24.B	25.B	26.B	27.D	28.C	29.D	30.B

EMISSION CONTROL

1. Which is a colourless, odourless tasteless and high toxicgas?
A. CO B. CO_2C. NO_XD. SO_X
2. What is acronym for DEF in selective catalyticreduction?
A. Diesel engine fluid B. Diesel exhaust fluid C. Diesel emission fluid D. Diesel engine fuse
3. What is acronym for SCR in emission controlsystem?
A. Silicon controlledrectifier B. Selective catalytic reduction
C. Selective controlled rectifierD. Selective controlledreduction
4. What is the acronym for EGR in emission controlsystem?
A. Engine gas recirculation B. Exhaust gas recirculation
C. Exhaust gateregulatorD. Emission gasrecirculation
5. Which one of the hydro carbon (HC) emitted due to lack ofoxygen?
A. From fueltank B. Fromcarburetor C. From blow by crank case D. From exhaust manifold
6. Which emission react with other compounds in the atmosphere to produce photo chemicalsmog?
A. CO B. HC C. PM D. SO_X
7. Which is the proposed date of implementation of bharat stage - 5 in entire country?
A. 1.4.2018 B. 1.4.2019 C. 1.4.2020 D. 1.4.2025
8.Which type of vehicle emission is measured in“g/Km”?
A. Two wheeleronly B. Light motor vehicle (LMV)only
C. Two wheeler andLMV D. Heavy motor vehicles(HMV)
9.Which type of vehicle emissions is measured in“g/Kwh”?
A. Twowheeler B. Two wheeler and light motorvehicle C. Light motorvehicle D. Heavy motorvehicle
10. What is the purpose of the EVAPcanister?
A. to trap the exhaust gas B. to trap the fresh charge C. to trap the leak off fuel D. to trap the fuelvapour
11. Where is connected the EVAP canister outlet?
A. Inletmanifold B. Exhaust manifoldC. Catalyst converter D. Fueltank
12. Which device changes carbon monoxide into carbon dioxide in the exhaustgas?
A. Canister B. Muffler C. Catalyticconverter D. Scavenges
13.What is the effect of high sulphur content in fuel?
A. In completecombustion B. Pitting in the engineparts
C. Fungus in the cylinderwalls D. Corrosive Wear of engineparts
14. What is the major constituents of blow by gas?
A. Hydrocarbon B. CO_2C. CO D. NO_X
15. Which type of engine uses SCR for emission control?
A. Petrol engine B. Diesel engineC. LPG engine D. CNGengine
16.When does a fresh charge escapes from the petrol engineexhaust?
A. During valve lead B. During valve open C. During valvelagD. During valveoverlap
17. Which type of fuel is recommended for catalytic converter installedengines?
A. Leadedpetrol B. Unleaded petrol C. High speed dieselD. Low speeddiesel
18. Which type of the emission control system that blow by gases are feed in to the inlet manifold of a runningengine?
A. Exhaust gasrecirculation B. Crank caseventilation
C. Positive crank caseventilation D. Catalyticconvention
19. Which controls the EGR valve in modern vehicle?
A. Engine vacuum controlledvalve B. Vacuum regulatedvalve
C. Linear electronic controlledvalve D. Solenoid controlledvalve
20.What does EPA refers toenvironment?
A. Environmental protectionagency B. Environmental provisionact
C. Environmental preventionact D. Environmental provisionagency
21. What is the current pollution norm applicable for the city ofDelhi?

A. BS I, B. BS II, C. BS- III, D. BSIV

22. Over exposure to air pollution can leadto.....
A. hair fall, B. respiratory diseases, C. bone crack, D. dentalproblems

23. When was stage-III standard implemented in NCR?
A. 2000 B. 2001 C. 2009 D. None of these

24. When was stage-IV standard implemented in India?
A. 2009 B. 2010 C. 2011 D. None of these

25. Which gas doesn't burn and is emitted without any conversion in a petrol engine ?
A. oxygen B. carbon dioxide C. carbon monoxide D. nitrogen

26. SCR denotes --------
A. selective catalytic reduction B. selective catalytic regulator
C. silicon catalytic regulator D. silicon catalytic recirculation

27. Which pollutants reduces the oxygen flow in blood and is especially dangerous towards heart disease Related diseases ?
A. carbon dioxide B. sulphuric acid C. carbon monoxide D. particulate

28. Which type of emission that contributes to air pollution can be reduced due to exhaust gas Recirculation (EGR) ?
A. Cl B. H C. nitrogen oxide D. pm

29. As a source of pollution, which engine produces high level nitrogen oxide ?
A. C.I. engine B. S.I. Engine biofuel engine D. LPG fuel engine

30. An automobile has ------ areas the emit pollutants in the atmosphere.
A. 2 B. 3 C. 4 D. 5

31. What is the source of emission of pollutants in the atmosphere ?
A. fuel tank B. carburetor C. crankcase D. all of these

32. Fuel emits vapour through the…….
A. fuel tank B. carburetor C. both D. none of these

33. How is half burnt air –fuel mixture emitted?
A. fuel tank B. crankcase C. carburetor D. none of these

34. The amount of carbon monoxide in fuel according to Indian stage –IV standards-----
A. 0.10 gram/km B. 1.0 gram/km C. 3.42 gram/km D. none of these

35. The area in which air and fuel meet is called------
A. quench area B. performance area C. wedge area D. none of these

36. The design of a hemisphere combustion chamber is-------
A. symmetrical B.asymmetrical C. triangular D. none of these

ANSWER **EMISSION CONTROL**

1.A	2.B	3.B	4.B	5.D	6.B	7.C	8.C	9.D	10.D	11.A	12.C	13.C	14.A	15.B
16.D	17.B	18.C	19.C	20.A	21.D	22.B	23.B	24.B	25.D	26.A	27.C	28.C	29.A	30.C
31.D	32.C	33.B	34.B	35.A	36.A									

AUTO ELECTRICAL SYSTEM

1.Dynamo converts-------
A. mechanical energy into electrical energy B. electrical energy into mechanical energy
C. chemical energy into heat energy D. heat energy into liquid energy
2. Which of the following is a component of dynamo?
A. Armature B. field coil C. Brushes D. all are correct
3. Dynamo is not producing current when there is -------
A. loose or broken wire connection B. defective switch C. broken or loose V-belt D. all are correct.
4. Charging dynamo intermittently or charging less is due to-----
A. Loose connection of dynamo terminal B. Loose earth connection
C. Dirty commutator D. All are correct
5. Body of the dynamo is made of ……. Steel in circular pipe shape.
A. oil B. Black C. Milk D. None of these
6.End shields are made of-----
A. Cast iron B. Aluminum alloy C. Both of them D.None of these
7. For checking the field coil connect the coil in ……with 12 volt battery and fix up 36 watts bulb in the circuit
A. Series B. parallel C. both A & B D. None of the above
8. The main lights are -----
A. head light B. parking light C. Blinker light D. all are correct
9. The head lamps are of ------ watts in a medium priced car.
A. 40-50 B. 400-500 C.100-200 D. 1000-2000
10. The candle power of parking light is-----
A. 1 B.3 C. 1.5 D. 2.05
11. The candle power of stop light is ------
A. 1.5 B. 2.5 C. 3.5 D. 3
12. Which of the following light contains 3 cp?
A. License plate light B. Tail light C. stop light D. all are correct
13. Which of the following light contains 1.5 cp?
A. Instrument light B. map light C. clock light D. all are correct
14. The candle power of glove compartment light is ------
A. 1 B. 1.5 C. 3 D. 6
15. . Which of the following light contains 6 cp?
A. map light B. head light C. dome light D. none
16. The candle power of head light is ------
A. 1 B. 3 C. 6 D. 50000-75000
17. The candle power of trunk compartment light is ------
A. 1 B. 1.5 C. 6 D. none
18. What is the maximum intensity of upper beam?
A. 1 cp B. 6cp C. 75000 cp D. 3 cp
19. Brown colour indicates---------
A. Battery circuit interior light B. Ignition light C. generator light D. none of these
20. Blue light indicates-------
A. All ground wire B. head lamp circuit C. Flasher unit D. generator circuit
21. For all ground wire we use the colour -----
A. Black B. white C.Red D. Yellow
22. White colour indicates ----
A. Ignition circuit B. All ground wire C. Generator circuit D. None of these
23. For generator circuit which of the following colour is used ------
A. Black B. Blue C. Brown D. Yellow
24. Brown colour is used to indicate-----
A. Control box B. Ammeter C. Horn D. All of these
25. For fused auxiliary circuit the colour is used-----
A. Yellow B. green C.Blue D. Brown
26. For Head lamp circuit fed from terminal on terminal switch we use-----
A. Yellow B. Brown C. Blue D.None- -

27. Green colour is used for----
A. Stop lamps B. Fuse gauge C. Direction indicators D. All of the above
28. which is a type of bulb ?
A. Bayonet type B. Prefocus type C. Festoon type D. All are correct
29. which is a type of bulb ?
A. Single contact B. Double filament C. Both D. None of these
30. An automobile contains which of the following circuit ?
A. Head light circuit B. Starting circuit C. Side light circuit D. All are correct
31. In automobiles the wires are connected in which of the following way------
A. Earth return system B. Double pole system C. Both the ways D. None of the above ways
32.In earth return system which terminal of the battery is earthed to the body or chassis which is Made of metal-----
A. Negative B. Positive C. Both D. None of these
33. On copper wires …… is moulded on top of wire----
A. Rubber B. Plastic C. Both D. None of these
34. In automobile which of the horn is used-----
A. Bulb horns B. Air pressure horns C. Electric horns D. All are correct
35. …… light illuminate back of the car in the night so that the other vehicle coming behind it are able to see it.
A. Head B.Parking C. Tail D.Stop
36 . …… are used to indicate the direction in which the vehicle is to turn.
A. Direction signal direction B.Stop light C.Parking light D. Interior light
37. ……. Are at the rear of the car and becomes on when brakes are aiming.
A. Head light B. Stop light C. Interior light D. None of these
38. The ….. mustbe aimed correctly to the required direction to get proper light on the road and to prevent the vehicle from accident-----
A. Stop light B. Head lights C. Interior lights D. Parking light
39. The unit to measure the brightness of the source light is-----
A. Candle power B. Power C. Candle D. None
40. The directional signal lights are operated-----
A.Manually B.Automatically C.Both A and B D. None of these
41. The current carrying capacity of cable size 44/0.012 is-----
A. 22 amp. B. 14 amp. C. 7. amp. D. 10 amp.
42. The current carrying capacity of cable size 28/0.012 is----
A. 22 amp. B. 14 amp. C. 7 amp. D.10 amp.
43. The current carrying capacity of cable size 14/0.012 is---
A. 22 amp. B. 14 amp. C. 7 amp. D. 10 amp.
44. For rewiring the vehicle the cable size of head lamps is---
A. 44/0.012 B. 28/0.012 C. 14/0.001 D. None
45. which of the following has cable size 14/0.012 ?
A. Field circuit B. Ignition circuit C.Accessories D.All are correct
46. For rewiring the vehicle the cable size of main battery feed circuit is-----
A. 44/0.012 B.28/0.0012 C. 28/0.112 D. 14/0.0012
47. Dynamo current is made from ------
A. DC B. AC C. AC and DC D. none of these
48. AC of alternator is converted into DC by-------
A. battery charger B. supercharger C. rectifier D.none of these
49. Magnetic field in a dynamo is created by----
A. field coil B. armature C. regulator D. rectifier
50. A voltage regulator has a battery , current terminal and ------
A. voltage terminal B. CB point terminal C. diode terminal D. negative terminal
51. How many winding looms does an alternator have ?
A. 2 B. 4 C. 1 D. 3
52. A dynamo winding is on------
A. 4 poles B. 3 poles C. two poles D. one pole
53. How many diodes are used in an alternator ?
A. 1 B. 2 C. 6 D. 8
54. A battery is not charged by a dynamo or alternator because of----
A. loose fan belt B. loose brush C. faulty diode D. all of these
55. The main parts of a dynamo are----
A. field armature and field coil B. commutator and carbon brush
C. body and side cover D. all of these

56. The main parts of an alternator are----
A. rotor and stator B. bearing C. regulator D. all of these
57. How is current taken from commutator?
A. by carbon brush B. by end plate C. by body D. by rotor
58. Dynamo brushes are made of ----
A. copper B. brass C. lead D. carbon
59. Which component can convert the AC produced by the alternator to DC?
A. triode B. capacitor C. diode D. Insulator
60. In the charging system of an alternator, which of the following is used to convert AC to DC?
A. slip rings B. diodes C. regulator D. starter

ANSWERS: AUTO ELECTRICAL SYSTEM

1.A	2.D	3.D	4.D	5.C	6.C	7.A	8.D	9.A	10.B	11.D	12.D	13.D	14.A	15.C
16.D	17.B	18.C	19.A	20.B	21.A	22.A	23.D	24.D	25.B	26.C	27.D	28.D	29.C	30.D
31.C	32.A	33.C	34.D	35.C	36.A	37.B	38.B	39.A	40.C	41.A	42.B	43.C	44.B	45.D
46.A	47.A	48.C	49.A	50.A	51.D	52.C	53.C	54.D	55.D	56.A	57.A	58.D	59.C	60.C