

063/21

Question Booklet Alpha Code

A

	Question Booklet Sl. No.
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A

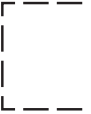
Total Number of Questions : 100

Time : 75 Minutes

Maximum Marks : 100

**INSTRUCTIONS TO CANDIDATES**

1. The Question Paper will be given in the form of a Question Booklet. There will be four versions of Question Booklets with Question Booklet Alpha Code viz. **A, B, C & D**.
2. The Question Booklet Alpha Code will be printed on the top left margin of the facing sheet of the Question Booklet.
3. The Question Booklet Alpha Code allotted to you will be noted in your seating position in the Examination Hall.
4. If you get a Question Booklet where the alpha code does not match to the allotted alpha code in the seating position, please draw the attention of the Invigilator **IMMEDIATELY**.
5. The Question Booklet Serial Number is printed on the top right margin of the facing sheet. If your Question Booklet is un-numbered, please get it replaced by new Question Booklet with same alpha code.
6. The Question Booklet will be sealed at the middle of the right margin. Candidate should not open the Question Booklet, until the indication is given to start answering.
7. Immediately after the commencement of the examination, the candidate should check that the Question Booklet supplied to him/her contains all the 100 questions in serial order. The Question Booklet does not have unprinted or torn or missing pages and if so he/she should bring it to the notice of the Invigilator and get it replaced by a complete booklet with same alpha code. This is most important.
8. A blank sheet of paper is attached to the Question Booklet. This may be used for rough work.
9. **Please read carefully all the instructions on the reverse of the Answer Sheet before marking your answers.**
10. Each question is provided with four choices **(A), (B), (C)** and **(D)** having one correct answer. Choose the correct answer and darken the bubble corresponding to the question number using Blue or Black Ball Point Pen in the OMR Answer Sheet.
11. **Each correct answer carries 1 mark and for each wrong answer 1/3 mark will be deducted. No negative mark for unattended questions.**
12. No candidate will be allowed to leave the examination hall till the end of the session and without handing over his/her Answer Sheet to the Invigilator. Candidates should ensure that the Invigilator has verified all the entries in the Register Number Coding Sheet and that the Invigilator has affixed his/her signature in the space provided.
13. Strict compliance of instructions is essential. Any malpractice or attempt to commit any kind of malpractice in the Examination will result in the disqualification of the candidate.



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1. As per the provision of the Factories Act, every accident is to be reported to the Inspector within
  - A) 48 hours
  - B) 12 hours
  - C) 24 hours
  - D) Seven days
2. Which one of the following is a finishing process ?
  - A) Sintering
  - B) Engraving
  - C) Rolling
  - D) Forging
3. The system used for mass production of identical parts within specified limits of sizes for selection of components at random is known as
  - A) Simplification
  - B) Automation
  - C) Standardization
  - D) Inter changeable system
4. The most abundantly used material in industry is
  - A) Cast iron
  - B) Mild steel
  - C) High carbon steel
  - D) Medium carbon steel
5. Grey cast iron gives grey fracture due to the
  - A) Cementite
  - B) Graphite
  - C) Ferrite
  - D) Pearlite
6. Bearing materials should possess
  - A) High compressive strength
  - B) Hard core
  - C) High hardness
  - D) High tensile strength
7. Accuracy of a measuring instrument is
  - A) Its capability to indicate the same reading again and again of a job
  - B) The closeness of reading that can be taken with it
  - C) The smallest value that can be measured with its use
  - D) The closest reading to its true size
8. A metric vernier caliper is having 25 divisions on vernier scale. These 25 divisions match with 24 divisions of main scale. If one main scale division = 0.5 mm, the least count of the vernier caliper is
  - A) 0.01 mm
  - B) 0.005 mm
  - C) 0.02 mm
  - D) 0.001 mm

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9. Hammers are usually made of
- A) Medium carbon steel
  - B) High speed steel
  - C) Mild steel
  - D) High carbon steel
10. For filing brass or bronze pieces, the following type of file is preferred
- A) Coarse cut or rough cut file
  - B) Second cut file
  - C) Single cut file
  - D) Double cut file
11. Which type of chisel used for chipping sharp corners ?
- A) Cross cut chisel
  - B) Side cut chisel
  - C) Diamond-point chisel
  - D) Flat chisel
12. Fullers are used for
- A) Decreasing the length of the work piece
  - B) Forming necks or grooves on cross section of a job
  - C) Holding the work pieces
  - D) Supporting the work pieces
13. Hand shears can be used for cutting sheets upto
- A) 0.4 mm
  - B) 0.6 mm
  - C) 0.8 mm
  - D) 1.6 mm
14. Stainless steel sheets contain
- A) 14% chromium and 7% nickel
  - B) 18% chromium and 8% nickel
  - C) 20% chromium and 10% nickel
  - D) 12% chromium and 6% nickel
15. Which instrument is used for laying out larger arcs, circles and various geometrical shapes ?
- A) Trammel
  - B) Comparators
  - C) Odd leg calipers
  - D) Combination set

**A**

16. Flux is used soldering to
- A) Remove the impurities present in solders
  - B) Fill up the gaps between the joints
  - C) Increase fluidity of solder metal
  - D) Prevent formation of oxides
17. The working temperature range for soldering process is
- A) 80°C to 120°C
  - B) 180°C to 250°C
  - C) 240°C to 320°C
  - D) 280°C to 340°C
18. During the resistance welding process, the pressure is released
- A) During heating process
  - B) As soon as the flow of current starts
  - C) After the weld cools
  - D) Immediately after the current supply
19. In an arc-welding process, intense heat is developed between the electrode and work piece due to
- A) Contact resistance
  - B) Time of current flow
  - C) High voltage
  - D) High current
20. The commonly used flux for ferrous materials is
- A) Borax
  - B) Alum
  - C) Zinc chloride
  - D) Potash
21. In galvanised pipes, galvanising is done on the following material
- A) Cast iron
  - B) Mild steel
  - C) Pig iron
  - D) Wrought iron
22. A material that is to be extruded must possess the following property
- A) Ductility
  - B) Plasticity
  - C) Malleability
  - D) Elasticity

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23. Diesel engine burns fuel of \_\_\_\_\_ volatility.  
A) Low                      B) Constant                      C) Same                      D) High
24. Which process is called scavenging ?  
A) Burnt gases escape into the atmosphere  
B) The mixture is ignited by electric spark  
C) Air fuel mixture drawn in the crank case  
D) The mixture flows down and pushes the burnt gas out
25. Which of the engine has maximum fuel efficiency ?  
A) Inline engine                      B) Radial engine  
C) Opposed engine                      D) "V" engine
26. The compression ratio is expressed in  
A)  $CR = \frac{V_s + V_c}{V_c}$                       B)  $CR = \frac{V_c}{V_s - V_c}$   
C)  $CR = \frac{V_c}{V_s + V_c}$                       D)  $CR = \frac{V_s - V_c}{V_c}$
27. The heating of gas at constant \_\_\_\_\_ is governed by Boyle's law.  
A) Pressure                      B) Volume                      C) Heat                      D) Temperature
28. In cylinder block piston liners are sealed with the water jacket by  
A) Oil ring                      B) O ring  
C) Oil seal                      D) Gasket
29. Valve clearance is adjusted when both the valves are in  
A) Inlet valve is only in open position  
B) Exhaust valve is only in open position  
C) Close position  
D) Open position

**A**

30. Final drive is provided on tractors
- A) To reduce torque                                              B) To reduce traction  
 C) To increase torque                                              D) To increase speed
31. The thermal efficiency of diesel engine varies between
- A) 30 to 40 per cent                                              B) 32 to 40 per cent  
 C) 35 to 40 per cent                                              D) 32 to 38 per cent
32. The velocity required to operate windmill is more than
- A) 10 kmph                                                              B) 5 kmph  
 C) 10 miles per hour                                              D) 5 miles per hour
33. The low speed engine runs at speed of
- A) More than 350 rpm                                              B) Less than 350 rpm  
 C) More than 1000 rpm                                              D) 350 rpm
34. The firing interval of 2-stroke, two-cylinder engine is
- A)  $360^\circ$                                               B)  $180^\circ$                                               C)  $720^\circ$                                               D)  $120^\circ$
35. The compression rings mounted on piston are generally made of
- A) High carbon steel                                              B) Low carbon steel  
 C) Chromium                                                              D) High speed steel
36. The firing order of 4-stroke, 6-cylinder engine is
- A) 1-3-5-6-4-2                                              B) 1-5-3-6-2-4  
 C) 1-3-4-2-6-5                                              D) 1-3-2-5-4-6
37. The cross sectional area of one cylinder of an engine multiplied by its stroke is
- A) Piston volume                                              B) Clearance volume  
 C) Combustion volume                                              D) Swept volume

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38. The gasket sealing is most difficult problem at
- A) Valve cover
  - B) Intake manifold
  - C) Head
  - D) Exhaust manifold
39. The fluctuation of engine speed during a cycle depends upon
- A) Mass of fly wheel
  - B) Governor speed
  - C) Mass of crankshaft
  - D) Speed of fly wheel
40. The major loss in a C.I. engine is
- A) Rubbing friction loss
  - B) Pumping loss
  - C) Direct heat loss
  - D) Loss due to incomplete combustion
41. The thermostat valve are designed to start opening at
- A) 60°C to 65°C
  - B) 65°C to 70°C
  - C) 70°C to 75°C
  - D) 75°C to 80°C
42. Worm gear is the part of
- A) Differential
  - B) Steering gear box
  - C) Gear box
  - D) Reduction unit
43. Too much belt tension produces
- A) Whirling sound
  - B) Clicking sound
  - C) Taping sound
  - D) Knocking sound
44. Worn out cam lobes will lead to
- A) Decreasing the engine life
  - B) Increasing the valve clearance
  - C) Increasing the valve opening height
  - D) Decreasing volumetric efficiency

**A**



45. Which of the following bearings can take both radial and thrust load ?
- A) Ball bearing                                          B) Bush bearing  
C) Roller bearing                                         D) Needle bearing
46. The multiplate clutches are not used in
- A) Earth moving machines                             B) Car  
C) Power tiller                                            D) Scooter
47. Clutch grab is
- A) Rapid engagement and disengagement of the clutch  
B) Failure of the pressure plate  
C) Failure of the pressure spring  
D) Abrupt engagement of the clutch
48. The device for smoothening out the power is
- A) Fly wheel                                                B) Torque converter  
C) Gear box                                                 D) Clutch
49. The combined lubrication system is the combination of
- A) Dry sump and pressure lubrication system  
B) Petro oil lubrication and dry sump lubrication  
C) Splash type lubrication system and pressure lubrication  
D) Dry sump lubrication and splash type lubrication system
50. Specific gravity of a fully charged battery is
- A) 1.260                                                    B) 1.280                                                    C) 1.270                                                    D) 1.250
51. P.T.O. shaft gets drive from
- A) Engine                                                    B) Transmission  
C) Output shaft                                            D) All are correct



60. Finer operation performed for seedbed preparation is  
A) Minimum tillage  
B) Reduced tillage  
C) Primary tillage  
D) Secondary tillage
61. Jointer and coulter are the parts of  
A) MB Plough  
B) Disc Plough  
C) Harrow Plough  
D) Indigenous Plough
62. The stubble type of mould board is mostly suitable for  
A) Sod soils  
B) Sticky soil  
C) Grassy land  
D) Tough soil
63. A wheel used for maintaining uniform depth of ploughing in different soil is  
A) Land wheel  
B) Cage wheel  
C) Gauge wheel  
D) Furrow wheel
64. A point at which the resultant of all horizontal and vertical forces acts is  
A) Centre of pull  
B) Centre of resistance  
C) Line of pull  
D) Centre of gravity
65. The vertical clearance of MB plough ranges from  
A) 3 to 5 mm  
B) 3 to 5 cm  
C) 2 to 5 mm  
D) 2 to 5 cm
66. Tilt angle of standard disc plough varies from  
A)  $42^\circ - 45^\circ$   
B)  $35^\circ - 42^\circ$   
C)  $25^\circ - 35^\circ$   
D)  $15^\circ - 25^\circ$
67. In disc harrow, a device used to provide a distance between two disc mounted on same gang axel is  
A) Arbor bolt  
B) Spool  
C) Scraper  
D) Gang
68. A harrow which based on a principle that side thrust against the front gang is opposed by side thrust of rear gang  
A) Spike tooth harrow  
B) Double action disc harrow  
C) Offset disc harrow  
D) Tandem disc harrow

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69. A special type of harrow with curved knives is  
A) Patela harrow  
B) Acme harrow  
C) Spring type harrow  
D) Spike tooth harrow
70. A subsoiler is used to break a hard pan of soil upto a depth of  
A) 40 cm  
B) 60 cm  
C) 75 cm  
D) 100 cm
71. The disc force is made into the ground by  
A) Weight  
B) Scouring  
C) Slicing  
D) Suction
72. Which of the following is not a part of laser leveller ?  
A) Bucket  
B) Transmitter  
C) Terracer  
D) Control box
73. The random scattering of seed on the surface of seedbed is  
A) Broadcasting  
B) Hill dropping  
C) Check row planting  
D) Dibbling
74. The most positive seed metering mechanism used in seed-drill is  
A) Cell feed type  
B) Cup feed type  
C) Internal double run type  
D) Fluted roller type
75. Which of the following is not a seed metering mechanism ?  
A) Fluted roller  
B) Star wheel  
C) Internal double run  
D) Cell feed
76. The metering mechanism used in potato planter is  
A) Cell feed type  
B) Serrated disc type  
C) Picker wheel type  
D) Spur wheel type
77. How much area will be covered by a 3 row-20 cm size seed-drill in one hour ? The forwarding speed of the machine is 3 km/h and working efficiency is 90%.  
A) 0.156 ha/h  
B) 0.162 ha/h  
C) 0.172 ha/h  
D) 0.182 ha/h

**A**

78. Pressure of power operated sprayers ranges from  
A) 20 to 25 kg/cm<sup>2</sup>                      B) 20 to 35 kg/cm<sup>2</sup>  
C) 20 to 45 kg/cm<sup>2</sup>                      D) 20 to 55 kg/cm<sup>2</sup>
79. The pump used in most of the hydraulic sprayer is  
A) Positive displacement pump              B) Vane pump  
C) Plunger pump                              D) Reciprocating pump
80. The nozzle used for herbicide and fungicide application is  
A) Deflector fan type                      B) Jet stream type  
C) Hollow con type                        D) Tangential whirl type
81. A machine used for cutting of cereal crops is  
A) Mower                                      B) Reaper  
C) Slasher                                     D) Combine
82. Cutter bar of reaper is made of  
A) High carbon steel                        B) Medium carbon steel  
C) High speed steel                        D) High grade steel
83. When knife and pitman run in a straight line, then the cutter bar is in  
A) Proper alignment                        B) Improper alignment  
C) Proper registration                      D) Improper registration
84. The action involved in harvesting of crop is  
A) Slicing action                            B) Scissor action  
C) Tearing action                            D) All are correct
85. The cutter bar used in cutting unit of combine is  
A) Slasher type                              B) Mower type  
C) Reaper type                              D) None of these

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86. A thresher causes more seed damage if
- A) Feed rate is reduced
  - B) Speed is decreased
  - C) Clearance is increased
  - D) Speed is increased
87. Threshing in rotating drum cylinder is due to
- A) Impact
  - B) Stripping
  - C) Rubbing
  - D) Tearing
88. The process of separation of grain from a mixture of grain and chaff is
- A) Cleaning
  - B) Grading
  - C) Separation
  - D) Winnowing
89. The equipment that has no driven/moving components is
- A) Machine
  - B) Implement
  - C) Tool
  - D) Instrument
90. The ratio of reel peripheral speed to forward speed of combine is termed as
- A) Reel speed
  - B) Reel velocity
  - C) Reel index
  - D) Reel diameter
91. A windmill suitable for water lifting is
- A) Double blade type
  - B) Multiple blade type
  - C) Four blade type
  - D) Triple blade type
92. The process of removing husk and bran of the paddy in one operation is called
- A) Hulling
  - B) Milling
  - C) Shelling
  - D) Scalping
93. L.S.U. drier is
- A) Continuous flow type drier
  - B) Continuous flow non-mixing type drier
  - C) Bin type drier
  - D) Continuous flow mixing type drier

**A**

94. In hammer mill, the force applied on grains is  
A) Crushing  
B) Shear  
C) Impact and shear  
D) Crushing and shear
95. The maximum suction head should not be more than  
A) 4.5 m  
B) 6.5 m  
C) 7.5 m  
D) 8.5 m
96. \_\_\_\_\_ is used to extract the juice from sugarcane.  
A) Scalping  
B) Crushing  
C) Tearing  
D) Shearing
97. Which one of the following give DC supply ?  
A) Dynamo  
B) Transformer  
C) Alternator  
D) Motor
98. What does a capacitor store ?  
A) Power  
B) Voltage  
C) Current  
D) Charge
99. A motor with an insulated rotor winding is called  
A) Squirrel cage motor  
B) Slip ring motor  
C) Capacitor motor  
D) None of these
100. A transformer consist of  
A) One coil  
B) Two coil  
C) Three coil  
D) Four coil
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Space for Rough Work



A