

108/2018

Question Booklet
Alpha Code

A

Question Booklet
Serial Number

100053

Total No. of questions : 100

Time : 75 Minutes

Maximum : 100 Marks

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 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.

SEAL

108/2018

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. Which among the following book was not authored by Stephen Hawking :
(A) Silent Spring (B) A Brief History of Time
(C) The Theory of Everything (D) Black Holes : The Reith Lectures
2. Name the social reformer who propounded the idea 'No caste No Religion No God' :
(A) Dr. Palpu (B) Sree Narayana guru
(C) Kumaranasan (D) Sahodaran Ayyappan
3. Who was the viceroy of India when the Bengal was partitioned in 1905?
(A) Lord Lytton (B) Lord Dufferin
(C) Lord Curzon (D) Lord Rippon
4. Who was the Mugal emperor of India during the first war of Indian independence in 1857?
(A) Bahadur Shah I (B) Akbar II
(C) Bahadur Shah II (D) Shah Alam
5. FIFA World Cup 2022 will be held at :
(A) Singapore (B) Qatar
(C) Paris (D) New York
6. Who was the author of the book 'Pracheena Malayalam'?
(A) Pandit Karuppan (B) Sri Narayana Guru
(C) Chattampi Swamikal (D) Kumara Guru
7. The boundary line between India and China is Known as :
(A) Radcliffe Line (B) McMahon Line
(C) 38th Parallel (D) Maginot Line
8. The national leader who was known as the father of Indian Unrest :
(A) Bal Gangadhar Tilak (B) Gopal Krishna Gokhale
(C) W.C. Banerjee (D) Motilal Nehru

A

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[P.T.O.]

9. Which river in India is Known as Bengal's sorrow?
(A) Mahanadi (B) Damodar
(C) Krishna (D) Narmada
10. Royal Indian Naval Mutiny was in :
(A) 1935 (B) 1939
(C) 1942 (D) 1946
11. Kasiranga national park is situated in :
(A) West Bengal (B) Sikkim
(C) Assam (D) Punjab
12. The first five year Plan was launched in the year :
(A) 1951 (B) 1962
(C) 1956 (D) 1957
13. Who was the first secretary of SNDP yogam?
(A) Dr. Palpu (B) N. Kumaranasan
(C) Mitavati Krishnan (D) C.V. Kunjuraman
14. The Nair Service Society was founded in the year :
(A) 1903 (B) 1907
(C) 1909 (D) 1914
15. Who was the viceroy of India when Indian National Congress was formed in 1885?
(A) Lord Curzon (B) Lord Dufferin
(C) Lord Mayo (D) Lord Rippon
16. Who was known as 'Frontier Gandhi'?
(A) Khan Abdul Ghaffer Khan (B) Bipin Chandra Pal
(C) Maulana Mohammed Ali (D) C. Rajagopalachari
17. The cartoon character "Common Man" was created by :
(A) Cartoonist Sankar (B) Bal Thackeray
(C) R. K. Laxman (D) Abu Abraham



18. The organisation started by Vagbhatananda :
- (A) Atma Vidya Sangham
(B) Yogakshema Sabha
(C) Arya Samaj
(D) Prathyaksha Raksha Daiva Sabha
19. Who was the author of the drama 'Adukkalayil ninnu Arangathekku'?
- (A) E M S
(B) M.P. Bhattathiripad
(C) P. Kesava Dev
(D) V.T. Bhattathiripad
20. The Oscar Award for the best film (2018) is awarded to :
- (A) Darkest Hour
(B) Lady Bird
(C) Spot light
(D) The Shape of Water
21. The safety sign that shows what must be done is :
- (A) Prohibition sign
(B) Mandatory sign
(C) Warning sign
(D) Informatory sign
22. The shape of warning sign is :
- (A) Circular
(B) Triangular
(C) Square
(D) Rectangular
23. Isolating fire from the supply of oxygen is called :
- (A) Starving
(B) Smothering
(C) Cooling
(D) Preventing
24. CLASS-C Fire is extinguished by using :
- (A) Dry powder
(B) Foam
(C) Water jet
(D) CTC
25. The portion of the file that inserted in to the handle is :
- (A) Side
(B) Edge
(C) Heel
(D) Tang
26. For filing wood, leather and other soft materials the file used is :
- (A) Single cut
(B) Double cut
(C) Rasp cut
(D) Curved cut



27. For marking lines parallel to the outside edge _____ is used.
(A) Outside caliper (B) Jenny caliper
(C) Inside caliper (D) Divider
28. The point angle of punch used for marking witness marks is :
(A) 30° (B) 60°
(C) 90° (D) 120°
29. _____ tap is used for finish threads in a blind hole.
(A) Taper tap (B) Intermediate tap
(C) Second tap (D) Plug tap
30. The least count of a Vernier Caliper (Metric) is _____ mm.
(A) 0.5 (B) 0.55
(C) 0.002 (D) 0.02
31. In a forge shop _____ are used for holding round rods horizontally.
(A) Round tongs (B) Square tongs
(C) Hollow tongs (D) Flat tongs
32. _____ used for enlarging a previously drilled hole in forge shop.
(A) Drift (B) Punch
(C) Drill (D) Tap
33. Select the cutting tool material which has a hot hardness temperature above 1000°C :
(A) Ceramic (B) HSS
(C) Stellite (D) HCS
34. Bronze is an alloy of :
(A) Copper and Zinc (B) Zinc and Tin
(C) Tin and phosphorous (D) Copper and Tin
35. The Upper Critical Temperature of Eutectoid steel is _____ $^\circ\text{C}$.
(A) 910° (B) 1023°
(C) 723° (D) 850°



36. The heat treatment process used for soften the steel and increase machinability is :
- (A) Annealing (B) Tempering
(C) Hardening (D) Normalising
37. The surface roughness value (Ra value) of grade N1 in microns is :
- (A) 50 (B) 1.6
(C) 0.1 (D) 0.025
38. The algebraic difference between a size and its corresponding basic size is called :
- (A) Limit (B) Fit
(C) Deviation (D) Tolerance
39. The tolerance size 25 H7 represents :
- (A) Hole with basic size 25 mm (B) Hole with basic size 7 mm
(C) Shaft with basic size 25 mm (D) Shaft with basic size 7 mm
40. The bond in the grinding wheel used for dressing castings :
- (A) Vitrified bond (B) Shellac bond
(C) Rubber bond (D) Resinoid bond
41. When abrasive grains wear away rapidly than the bond and produces glassy like appearance the condition of the wheel is called?
- (A) Glazing (B) Loading
(C) Truing (D) Dressing
42. In the grinding wheel specification 51-A-46-H-5-V-8 the abrasive grain size is :
- (A) Coarse (B) Medium
(C) Fine (D) Very fine
43. The grinding wheel used for Gashing milling cutter teeth is :
- (A) Straight cup type (B) Flaring cup type
(C) Dish type (D) Saucer type



44. The depth of cut in a cylindrical grinder is given by moving _____ mounted in the cross slide :
- (A) Head stock (B) Wheel head
(C) Foot stock (D) Table
45. The point angle of a HSS twist drill for drilling Mild Steel is :
- (A) 118 (B) 181
(C) 108 (D) 188
46. The size of a taper shank twist drill is 27 mm. The Moarse taper No. of drill shank is :
- (A) MT1 (B) MT2
(C) MT3 (D) MT4
47. In the drill designation "twist drill 9.5-H-IS5101-HS" 'H' represents :
- (A) tool type (B) tool material
(C) tool diameter (D) tool number
48. Cutting speed of HSS drill for drilling M.S. Flat is _____ m/min.
- (A) 70 – 100 (B) 35 – 50
(C) 20 – 30 (D) 5 – 8
49. The operation of enlarging a hole to a given depth to house head of socket heads and Cap screws :
- (A) Counter sinking (B) Counter boring
(C) Spot facing (D) Reaming
50. CNC stands for :
- (A) Computer Number Control (B) Compiler Number Control
(C) Compiler Numeric Control (D) Computer Numeric Control
51. The term refers to the pulse per second in CNC machine is :
- (A) Pulse ratio (B) Pulse frequency
(C) Pulse width (D) Pulse concentration

52. The programme code for Absolute co-ordinate system is :
(A) G00 (B) G01
(C) G90 (D) G91
53. Gears with internal teeth used in automobiles is :
(A) Bevel gears (B) Hypoid gears
(C) Worm gears (D) Annular gears
54. The outer edge of the teeth of a gear bounds a circle called :
(A) Addendum circle (B) Dedendum circle
(C) Base circle (D) Root circle
55. The ratio of number teeth to pitch diameter in inches is called :
(A) Diametral pitch (B) Circular pitch
(C) Linear pitch (D) Normal pitch
56. The height of teeth equal to the sum of Addendum and Dedendum is called :
(A) Working depth (B) Whole depth
(C) Pitch (D) Lead
57. Name the part of a Shaper which help to lift the tool in return stroke.
(A) Saddle (B) Clapper box
(C) Ram (D) Bull gear
58. Name the part of Shaper which carries the tool head and reciprocates while machining.
(A) Pawl (B) Ratchet wheel
(C) Bull gear (D) Ram
59. The quick return mechanism provided in Shaper to :
(A) Increase cutting time
(B) Reduce cutting stroke time
(C) Increase Idle time in return stroke
(D) Minimise Idle time in return stroke

60. When the distance between the center of the Bull gear to sliding block of slotted link increases then the stroke length of the Shaper?
(A) decreases (B) increases
(C) first increases then decreases (D) unaltered
61. Which is not a cause of stroke length change during working of Shaper?
(A) bevel gear shaft tight (B) leadscrew wear
(C) breakage of driving pin (D) too loose driving pin
62. In the Automatic feed mechanism of Shaper the direction of feed can be change by turning the _____ by 180° .
(A) Pawl (B) Ratchet wheel
(C) Feed screw (D) Crank wheel
63. The shape of a Slotter table is :
(A) Square (B) Rectangular
(C) Round (D) Box
64. The Slotter used for precision work is :
(A) Puncher slotter (B) Production slotter
(C) Tool room slotter (D) Die slotter
65. In a Slotter the Ram reciprocates in the _____ direction.
(A) Vertical (B) Horizontal
(C) Angular (D) Rotary
66. In the Power feed mechanism of Slotter the feed rate is varied by changing the position of :
(A) Pawl (B) Ratchet wheel
(C) Crank pin (D) Roller
67. The end clearance angle of a slotter parting tool is :
(A) 20° (B) 18°
(C) 2° (D) 10°

68. In a Planer metal cutting take place by the reciprocation of :
(A) Table (B) Tool head
(C) Cross rail (D) Counter shaft
69. In a Planer, tool is fitted in the :
(A) Table (B) Bed
(C) Tool head (D) Column
70. In which type of planer work setting time saved by clamping workpiece at one table while machining on the other table :
(A) Pit planer (B) Doublehousing planer
(C) Open side planer (D) Divided table planer
71. In the reversible motor driving mechanism of planer _____ supplies the field current for DC Generator :
(A) Exciter (B) AC Motor
(C) DC Motor (D) Reversing switch
72. The purpose of T-Slots in the feed disc of Planer is to set the amount of :
(A) Speed (B) Feed
(C) Depth of cut (D) Angle of cut
73. In _____ milling machine the position of the spindle is perpendicular to the work table :
(A) Plane milling machine (B) Universal milling machine
(C) Vertical milling machine (D) Horizontal milling machine
74. The part of plane milling machine houses the speed mechanism of table and feed motor :
(A) base (B) column
(C) spindle (D) knee
75. Collet chuck or adaptor is used for holding these type of cutters.
(A) Arbor type milling cutters (B) Shank type milling cutters
(C) Facing type milling cutters (D) Convex milling cutters

76. The milling cutter used for producing convex surface at the corner or edge of a work piece is :
(A) Convex milling cutter (B) Concave milling cutter
(C) Corner rounding cutter (D) Sprocket milling cutter
77. The milling cutters having teeth on periphery and side is :
(A) Side and face milling cutter (B) Face milling cutter
(C) Plane milling cutter (D) Gear cutter
78. In a milling cutter the round portion for the chip space between adjacent teeth is called :
(A) Land (B) Gash
(C) Fillet (D) Heel
79. The size of a milling cutter is $150 \times 6 \times 27$ mm. What type of cutter is this?
(A) Single angle cutter (B) Equal angle cutter
(C) Slitting saw cutter (D) Slab milling cutter
80. In _____ milling the work is fed against the direction of rotation of cutter :
(A) Climb milling (B) Up milling
(C) Down milling (D) Face milling
81. Select the milling operation in which several surfaces of work simultaneously feed against a number of cutters mounted on the arbor.
(A) Plane milling (B) Face milling
(C) Side milling (D) Gang milling
82. Machining Convex and concave surfaces and Gear cutting are some examples of _____ milling.
(A) Form milling (B) Key way milling
(C) Face milling (D) End milling
83. The operation of machining a vertical surface on the side of workpiece using a sidemilling cutter is called :
(A) Plane milling (B) Face milling
(C) Gang milling (D) Side milling
84. In rack milling _____ feed is used to move the work piece into the cutter :
(A) Cross feed (B) Longitudinal feed
(C) Angular feed (D) Downfeed

85. If 'm' is the module then Linear pitch of a rack is obtained by the formulae :
- (A) π/m (B) πm
(C) $\pi/2m$ (D) $\pi m/2$
86. In indexing mechanism _____ eliminates the need for counting the number of holes each time the crank has to be turned.
- (A) Index plate (B) Worm shaft
(C) Index crank (D) Sector arm
87. In a milling machine if cutter diameter is given in mm then rpm calculated by the formula $V = :$
- (A) $\pi d/1000$ (B) $\pi d n$
(C) $\pi n/1000$ (D) $\pi d n/1000$
88. The chuck is situated in the _____ part of the Lathe.
- (A) Head stock (B) Carriage
(C) Tailstock (D) Bed
89. The topslide in a lathe is swiveled at angle and feed in _____ taper turning method.
- (A) Tailstock offset (B) Form tool
(C) Compound rest swivelling (D) Taper turning attachment
90. The part of Lathe which slides over the bed on which compound rest is fitted :
- (A) Tailstock (B) Follower rest
(C) Steady rest (D) Saddle
91. Four jaw chuck is also called :
- (A) Self centering chuck (B) Universal chuck
(C) Independent jaw chuck (D) Collet chuck
92. In which Lathe operation burrs and sharp edges are removed from turned components :
- (A) Facing (B) Centering
(C) Threading (D) Chamfering



93. The body and base of the Lathe Tailstock is made out of :
(A) Castiron (B) Wrought iron
(C) Pig iron (D) Carbon steel
94. In which method threads are produced without metal cutting and chip removal.
(A) thread milling (B) thread rolling
(C) thread grinding (D) thread taping
95. Which is the Lathe operation in which existing hole is enlarged?
(A) boring (B) tapping
(C) drilling (D) counter sinking
96. The Lathe tailstock spindle is provided with _____ standard taper.
(A) B.S. Taper (B) Metric taper
(C) Moarse taper (D) Jerno taper
97. The amount of taper of a Standard pin taper (British) is :
(A) $2/3$ "TPF (B) $1/2$ "TPF
(C) $1/4$ "TPF (D) $1/3$ "TPF
98. This lathe center has minimum wear and tear particularly suitable for tailstock offset turning.
(A) Ball center (B) Tipped center
(C) Half center (D) Pipe center
99. The Brown and Sharp self holding taper BS18 has a taper equal to :
(A) $2/3$ "TPF (B) $1/2$ "TPF
(C) $1/4$ "TPF (D) $1/3$ "TPF
100. For finish Facing depth of cut is not more than 0.1mm and feed rate is _____mm approximately.
(A) 0.5 (B) 0.05
(C) 0.1 (D) 0.01