

# 105/2018

Question Booklet  
Alpha Code

A

Question Booklet  
Serial Number

Total No. of Questions: 100

Maximum : 100 Marks

Time : 75 Minutes

## 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.

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**105/2018**

Maximum : 100 Marks

Time : 1 hour and 15 minutes

1. The borderline between India and China is  
(A) Radcliffe Line (B) McMahon Line  
(C) Durand Line (D) Palk Strait
2. The largest Union Territory of India is  
(A) Puducherry (B) The Lakshadweep  
(C) The Andaman & Nicobar Islands (D) Daman & Diu
3. The National River of India is  
(A) The Ganga (B) The Sindhu  
(C) The Yamuna (D) The Brahmaputra
4. First Chairman of the Planning Board in India is  
(A) Dadabhai Naoroji (B) V.K.R.V. Rao  
(C) Jawaharlal Nehru (D) M.N. Roy
5. Which of the following Indian Prime Minister introduced the Twenty Point Programme ?  
(A) Indira Gandhi (B) Manmohan Sing  
(C) Narasimha Rao (D) Jawaharlal Nehru
6. Who introduced the Subsidiary Alliance System in India ?  
(A) Lord Dalhousie (B) Lord Wellesley  
(C) Lord Canning (D) Lord Cornwallis
7. First Martyr of the Revolt of 1857 is  
(A) Nana Saheb (B) Jhansi Rani  
(C) Mangal Pandey (D) Tantia Tope
8. The first President of Indian National Congress is  
(A) A.O. Hume (B) Dadabhai Naoroji  
(C) W.C. Bannerjee (D) C. Sankaran Nair
9. Which of the following strike is NOT led by Mahatma Gandhi ?  
(A) Non-Co-operation Movement (B) Civil Disobedience Movement  
(C) Quit India Movement (D) Home Rule Movement
10. Who composed the 'Mushakavamsakavya' ?  
(A) Banabhatta (B) Atula  
(C) Kautilya (D) Kalhana

A

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**105/2018**  
**[P.T.O.]**

11. The social reformer of Kerala, who is known as 'Vidyadhiraja'
- (A) Vaikunda Swamikal (B) K.P. Kesava Menon  
(C) Chattampi Swamikal (D) Mannath Padmanabhan
12. Which of the following person translated the autobiography of Karl Marx into Malayalam ?
- (A) Swadeshbhimani Ramakrishna Pillai  
(B) E.M.S. Namboodiripad  
(C) A.K. Gopalan  
(D) E.K. Nayanar
13. The social reformer who is known as 'Bharatha Kesari' is
- (A) T.K. Madhavan (B) Mannath Padmanabhan  
(C) K. Kelappan (D) P. Krishnapillai
14. After, which of the following consecration of Lord Shiva, Sree Narayana Guru replied, "I consecrated the Ezhava Shiva and not the Brahmin Shiva" ?
- (A) Sivagiri (B) Aruvippuram  
(C) Thalassery (D) Aluva
15. The Sadhujana Paripalana Sangham was founded under the leadership of
- (A) Ayyankali (B) Dr. Palpu  
(C) Vagbhadananda Gurukkal (D) Sahodaran Ayyappan
16. The present Chief Election Commissioner of India is
- (A) Umesh Sinha (B) Ashok Lavosa  
(C) Om Prakash Rawat (D) Sunil Arora
17. The Head Quarters of I.S.R.O. is at
- (A) Bangalore (B) Mumbai  
(C) Delhi (D) Sriharikotta
18. The Australian cricketer who lost captaincy due to ball tampering scandal recently
- (A) David Warner (B) Steve Smith  
(C) Cameron Bancroft (D) Mitchel Starc
19. The first Nigerian actor to play a leading role in an Indian Film is
- (A) Samuel Abiola Robinson (B) Femi Adebayo  
(C) Yemi Ajibade (D) Ken Erics
20. The popular Science book on cosmology 'A Brief History of Time' is the work of
- (A) Issac Newton (B) Charles Darwin  
(C) Stephen Hawking (D) Albert Einstein

21. V-blocks are available in grades of  
(A) 0 and 1 (B) 1 and 2  
(C) A1 and A2 (D) A and B
22. Where is pin hook spanner used ?  
(A) Circular nut having slot (B) Hexagonal nut  
(C) Square nut (D) None of the above
23. The best way of avoiding accident is by  
(A) Doing work in ancient way  
(B) Observing safety rules related to job, machine and work piece  
(C) Doing work in one's own way  
(D) Using safety equipment
24. A 6H7 holes is to be reamed in a steel work piece. What size of drill will be required ?  
(A) 5.5 mm (B) 5.8 mm  
(C) 6.0 mm (D) 6.2 mm
25. Gun metal is an alloy of  
(A) copper, tin and zinc (B) copper, lead and zinc  
(C) iron, zinc and nickel (D) aluminum, lead and nickel
26. An oily floor should be cleaned by  
(A) Cotton waste (B) Putting water  
(C) Putting saw dust (D) Spraying carbon dioxide or sand
27. The point angle of twist drill depends upon the  
(A) cutting speed (B) type of drilling machine  
(C) size of drill (D) material to be drilled
28. Carbon content in cold chisel is  
(A) 0.6 to 0.7% (B) 1.2 to 1.4%  
(C) 0.3 to 0.5% (D) 0.9 to 1.1%
29. The movable jaw of a bench vice is not moving even through the spindle is turned  
(A) fixed and movable jaw are over tight  
(B) spindle pin is broken  
(C) spring is not functioning  
(D) threads on spindle are slightly worn out

30. Drill chucks are hold on the machine spindle by means of  
(A) chuck nut (B) drift  
(C) draw in bar (D) arbor
31. For machining a job on the shaper the length of the stroke should be  
(A) equal to that job length. (B) more than job length.  
(C) less than the job length. (D) maximum length of stroke.
32. In a crank type shaping machine the length of the stroke can be increased or decreased by rotating the  
(A) Vertical lead screw (B) Horizontal lead screw  
(C) Radial lead screw (D) Connecting rod
33. Quick return mechanism is used in  
(A) milling machine (B) shaper  
(C) welding machine (D) grinding machine
34. The type of file used for wood work is  
(A) single cut file (B) double cut file  
(C) rasp cut file (D) None of the above
35. The feed of shaper takes place  
(A) at the middle of cutting stroke (B) at the middle of return stroke  
(C) at the start of return stroke (D) at the start of cutting stroke
36. 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) Case hardening  
(C) Hardening (D) Annealing
37. Which among the following locators is best suitable for location of a round shaped job ?  
(A) Pin type locator (B) Wedge type locator  
(C) Vee locator (D) Adjustable stop locator
38. The root of ISO metric thread is  
(A) flat (B) round  
(C) sharp corner (D) None of the above

39. Grade-00 slip gauge are used in  
(A) Work shop by operator (B) Inspection room  
(C) Calibration (D) Neither (A) nor (B)
40. Metric outside micrometer has a threaded spindle with a pitch is  
(A) 0.5 mm (B) 0.25 mm  
(C) 0.02 mm (D) 0.01 mm
41. What is the hardening temperature for HSS tool ?  
(A) 1250 °C (B) 950 °C  
(C) 850 °C (D) 750 °C
42. Mass-produced component should be interchangeable, one of the following is the most important factor required to achieve the interchangeability in mass production :  
(A) Dimensional accuracy (B) Geometrical accuracy  
(C) Standardization (D) Surface finish
43. The symbol  $\nabla$  indicates the value of surface finish  
(A) 40 to 80 microns (B) 16 to 40 microns  
(C) below 16 microns (D) None of the above
44. Reciprocating movement of the table in planer is obtained by  
(A) Loose and fast pulleys (B) Worm and worm wheel  
(C) Rack and gear (D) Cam drive
45. The top and sides of the table of shaper usually have  
(A) L-types slots (B) T-types slots  
(C) U-types slots (D) I-types slots
46. Which one of the planning machine has only one column ?  
(A) Pit planning machine (B) Plate planning machine  
(C) Hydraulic planning machine (D) Open side planning machine

47. Which of the following washer is used where the loosening of bolts due to vibrations or shock are more likely to be ?
- (A) Plain washer (B) Spring washer  
(C) Tap washer (D) Fibre washer
48. Nut is a
- (A) temporary fastener (B) semi-permanent fastener  
(C) permanent fastener (D) None of the above
49. Which of the following instrument is used to check the hills and valley for the surface of the job ?
- (A) By ammeter (B) By dial gauge  
(C) By barometer (D) By Taly-surf
50. Jobs are placed in ash or \_\_\_\_\_ for annealing.
- (A) lime stone (B) coke  
(C) pig iron (D) All of these
51. The included angle of acme thread is \_\_\_\_\_ degree.
- (A) 30 (B) 29  
(C)  $47\frac{1}{2}$  (D) 60
52. The percentage of carbon in grey cast iron is \_\_\_\_\_
- (A) more than 6.67% (B) less than 2.1%  
(C) more than 2.1% (D) None of these
53. Clearance between the mating parts is measured by which of the following gauge ?
- (A) Dial gauge (B) Plug gauge  
(C) Feeler gauge (D) Caliper gauge
54. The nut used to fix blade in hacksaw frame is \_\_\_\_\_
- (A) Dome nut (B) Thumb nut  
(C) Wing nut (D) Castle nut



55. Which drilling machine is used in mass production ?  
(A) Bench type drilling machine (B) Pillar type drill press  
(C) Portable drilling machine (D) Gang type drilling machine
56. In normalizing process, hot steel is made to cool by  
(A) immersing it in oil (B) keeping it in still air at room temperature  
(C) leaving it in cold air (D) immersing it in water
57. \_\_\_\_\_ marking media takes too much time to get dry and it makes clear lines.  
(A) Prussian blue (B) Chalk  
(C) Copper sulphate (D) None of the above
58. With the help of vernier bevel protractor any angle can be measure up to the accuracy of the \_\_\_\_\_ of 1 degree.  
(A) 10<sup>th</sup> parts (B) 12<sup>th</sup> parts  
(C) 9<sup>th</sup> parts (D) 4<sup>th</sup> parts
59. The standard range of sizes covered in the BIS system of limit and fits are  
(A) 0 to 10 mm (B) 0 to 100 mm  
(C) 25 to 400 mm (D) 0 to 500 mm
60. It is used for aligning the vice with shaping machine table in position.  
(A) Steel rule (B) Straight edge  
(C) Dial test indicator (D) Tee bolt
61. The tolerance of a hole is the difference between the  
(A) maximum hole and minimum shaft  
(B) minimum hole and maximum shaft  
(C) maximum hole and the maximum shaft  
(D) maximum hole and the minimum hole
62. Zero error of a 50-75 mm outside micrometer can be checked with  
(A) dial test indicator (B) vernier height gauge  
(C) feeler gauge (D) test piece

63. In abrasive jet machining, the nozzle mounted in the fixture is made up of  
(A) High Speed Steel (B) Aluminium Oxide  
(C) Silicon Carbide (D) Tungsten Carbide
64. Which thread is used in lead screw of lathe ?  
(A) Acme thread (B) Butters thread  
(C) Square thread (D) Knuckle thread
65. Which type head stock have back gear mechanism ?  
(A) All geared head stock (B) Stepped cone pulley head stock  
(C) All of the above (D) None of the above
66. What is the purpose of clearance angle of lathe cutting tool ?  
(A) To guide the chip away  
(B) To avoid over heating  
(C) To prevent the tool rubbing with the work  
(D) To break the lengthy chips
67. For turning the work between centers, both faces of the work piece are drilled with  
(A) Twist drill (B) Counter sunk  
(C) Counter bore (D) Centre drill
68. In lathe the follower rest is fixed on  
(A) Lathe bed (B) Saddle  
(C) Tail stock (D) Carriage
69. Which mechanism is used to connect carriage to lead screw ?  
(A) Rack and pinion (B) Screw cutting mechanism  
(C) Half nut mechanism (D) Back gear mechanism
70. In a screw thread lead is equal to \_\_\_\_\_  
(A) Pitch (B) Pitch X No. of start  
(C) Pitch X Major diameter (D) Pitch X Minor diameter

71. Length of sine bar is  
(A) Length of face  
(B) Length between outside of two rollers  
(C) Length between Centre of two rollers  
(D) Length between inside of two rollers
72. Which of the following is not a good quality cutting fluid ?  
(A) High heat absorption (B) High flash point  
(C) Good lubricating quality (D) High viscosity
73. Which one of the following is an example of gravity feed lubricating system ?  
(A) Stauffer screw down greaser (B) Wick feed lubricator  
(C) Oil can (D) Grease gun
74. In CNC programming, code represent feed in mm/rev. is  
(A) G70 (B) G71  
(C) G95 (D) G96
75. In CNC machine, which control system have the facility to feed back information to the control ?  
(A) Open loop control system (B) Closed loop control system  
(C) Both (A) and (B) (D) None of the above
76. The rotary movement in z-axis of a CNC machine is called \_\_\_\_\_  
(A) A-axis (B) B-axis  
(C) C-axis (D) D-axis
77. In horizontal milling machine cutters are mounted on  
(A) Spindle (B) Draw bar  
(C) Arbor (D) Saddle
78. The radial distance between pitch circle and outside circle of a spur gear is known as \_\_\_\_\_  
(A) Chordal addendum (B) Dedendum  
(C) Circular pitch (D) Addendum

79. What is the maximum table tilting angle of a universal milling machine ?  
(A) 45° (B) 55°  
(C) 60° (D) 75°
80. The ratio between pitch circle diameter in millimetres to number teeth of a spur gear is known as  
(A) Circular pitch (B) Diametrical pitch  
(C) Addendum (D) Module
81. If \_\_\_\_\_ is not tightened properly, the draw bolt will get loosened.  
(A) Arbor (B) Lock nut  
(C) Key (D) Arbor support
82. While using the long arbor, the arbor will sag if \_\_\_\_\_ is not used.  
(A) Coller (B) Front brace  
(C) Arbor support (D) Draw bar
83. Which number involute gear cutter is used to cut rack ?  
(A) 1 (B) 2  
(C) 3 (D) 4
84. Which type of slots is provided on the milling machine table for clamping work piece or work holding devices ?  
(A) J-slot (B) T-slot  
(C) C-slot (D) E-slot
85. In milling process the work is feeding against the direction of rotation of the cutter, the method is known as  
(A) Straight milling (B) Opposite direction milling  
(C) Up milling (D) Down milling
86. What is the cutting speed of a side and face milling cutter having outer dia. 125 mm and running at an rpm of 80 ?  
(A) 31.4 M/min. (B) 62.8 M/min.  
(C) 31.4 mm/min. (D) 62.8 mm/min.

87. Formula of simple indexing is
- (A)  $N/40$  (B)  $40/N$   
(C)  $30/N$  (D)  $N \times 30$
88. What is the pitch circle diameter of a spur gear of two module 47 teeth ?
- (A) 94 mm (B) 98 mm  
(C) 102 mm (D) 90 mm
89. Pitch of the table lead screw of milling machine is 5 mm, while linear indexing to get 1 mm movement how many times the crank of indexing head will turn ?
- (A) 8 (B) 5  
(C) 11 (D) 6
90. Which mechanism used in indexing head ?
- (A) Nut and bolt (B) Worm and worm gear  
(C) Indexing plate (D) Rack and pinion
91. A grinding wheel is specified as 32 A 46 H 8 V. In this, the letter 'V' represented for
- (A) Grade (B) Grid size  
(C) Structure (D) Bond
92. In center less grinding the longitudinal feed rate can be varied by changing \_\_\_\_\_
- (A) Angle of inclination of control wheel  
(B) Angle of inclination of grinding wheel  
(C) Angle of inclination of work rest  
(D) Movement of work rest
93. Which bond is used for heavy duty, large diameter wheels, a fine finish is required ?
- (A) Shellac bond (B) Silicate bond  
(C) Rubber bond (D) Resinoid bond

94. The grain size of grinding wheel is 24, it is a \_\_\_\_\_ grain wheel.  
(A) Coarse (B) Medium  
(C) Fine (D) Very Fine
95. In the marking system of grinding wheel, silicon carbide wheel is denoted by which letter ?  
(A) O (B) A  
(C) S (D) C
96. While grinding soft metals, the chips are get clogged between the abrasive particle of the wheel. This condition is known as  
(A) Clogging (B) Glazing  
(C) Loading (D) Pinning
97. Tool used to dressing the grinding wheel is  
(A) File card (B) Wire brush  
(C) Wheel balancer (D) Wheel dresser
98. The process of shaping of the grinding wheel to make it run concentric with axis is known as  
(A) Dressing (B) Glazing  
(C) Loading (D) Truing
99. In centre less grinder, for longitudinal feed the control wheel inclined at an angle of  
(A)  $1^\circ - 7^\circ$  (B)  $9^\circ - 15^\circ$   
(C)  $10^\circ - 13^\circ$  (D)  $7^\circ - 10^\circ$
100. When new carbide tipped tools required re-sharpening it is first ground to rough form with  
(A) Diamond wheel (B) Silicon carbide  
(C) Sand stone (D) Green grit silicon carbide

**SPACE FOR ROUGH WORK**

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