M.Tech. (Mechanical Engineering) Entrance Test, 2022

1. At normal atmospheric conditions, the ratio of the speed of sound in water to that of air is about :

(A) 1.5 (B) 2.0

(C) 4.0 (D) 8.2

2. The velocity potential function for a source varies with distance r as :

(A) $\frac{1}{r}$ (B) $\frac{1}{r^2}$

(C) e^r (D) $\ln r$

3. The loss coefficient (k) for a globe valve is given by $h_l = k\frac{V^2}{2g}$. The value of k will be least when the valve is :

(A) Less than half open (B) Half open

(C) More than half open (D) Fully open

4. The discharge in m^3/s for laminar flow through a pipe of diameter 0.04 m having a centre line velocity 3 m/s is :

(A) $\frac{3\pi}{50}$ (B) $\frac{3\pi}{2500}$

(C) $\frac{3\pi}{5000}$ (D) None of these

5. In a laminar boundary layer over a flat plate, the skin friction coefficient C_{fx} is given by :

(A) $C_{fx} = \frac{0.664}{\sqrt{Re_x}}$ (B) $C_{fx} = \frac{1.328}{\sqrt{Re_x}}$

(C) $C_{fx} = \frac{0.874}{\sqrt{Re_x}}$ (D) $C_{fx} = \frac{1.912}{\sqrt{Re_x}}$

6. A piezometer is used to measure the :

(A) Undisturbed liquid pressure

(B) Gauge pressure in a static mass of liquid

(C) Pressure difference between two liquid

(D) Dynamic pressure of a moving stream of liquid

7. An orifice fitted with some kind of pipe extension is known as :

(A) Weir (B) Notch

(C) Nozzle (D) Mouthpiece

8. If G is the centre of gravity, B is the centre of buoyancy and M is the metacentre of floating body, then the body to be in unstable equilibrium :

(A) MG = 0 (B) BG = 0

(C) M is below G (D) M is above G

9. .....is expected to have highest thermal conductivity.

(A) Solid Ice

(B) Melting Ice

(C) Water

(D) Steam

10. What does transient conduction mean ?

(A) Heat transfer for a short time.

(B) Conduction when the temperature at a point varies with time.

(C) Very little heat transfer.

(D) Heat transfer with a very small temperature difference.

11. A body which partly absorbs and partly reflects but does not allow any radiation to pass through it is called :

(A) Specular (B) Grey

(C) Opaque (D) Black

12. The reciprocity theorem states that :

(A) $A_1F_{1-2} = A_2F_{2-1}$ (B) $F_{1-2} = F_{2-1}$

(C) $A_2F_{1-2} = A_1F_{2-1}$ (D) None of these

13. Heat transfer coefficients for free convection in gases, forced convection in gases and vapours, and for boiling water lie, respectively in the range of :

(A) 5 – 15, 20 – 200 and 3000 – 50000 W/m^2K

(B) 20 – 50, 200 – 500 and 50000 – 100000 W/m^2K

(C) 50 – 100, 500 – 1000 and 100000 – 1000000 W/m^2K

(D) 20 – 100, 200 – 1000 and a constant 1000000 W/m^2K

14. Match List-I with List-II and select the correct answer using the codes given below the lists :

	List-I		**List-II**
P.	Grashoff number	1.	Mass diffusion
Q.	Schmidt number	2.	Transient heat conduction
R.	Weber number	3.	Free convection
S.	Fourier number	4.	Forced convection
		5.	Surface tension

Codes :

(A) P-2, Q-3, R-4, S-1 (B) P-2, Q-3, R-1, S-4

(C) P-3, Q-4, R-1, S-2 (D) P-3, Q-1, R-5, S-2

15. During the process of boiling and condensation, only a phase change takes and one fluid remains at constant temperature throughout the heat exchanger. In terms of number of heat transfer units (NTU), the effectiveness of such an exchanger would be :

(A) $\frac{\text{NTU}}{1+\text{NTU}}$ (B) $1 - e^{-\text{NTU}}$

(C) $\frac{1-e^{-2\text{NTU}}}{2}$ (D) None of these

16. The average value of heat transfer coefficient (h) for the turbulent flow over flat plate is given by :

(A) $h = 0.023\ (k/L)\ (Re_L)^{0.8}\ (Pr)^{0.33}$

(B) $h = 0.332\ (k/L)\ (Re_L)^{0.5}\ (Pr)^{0.33}$

(C) $h = 0.037\ (k/L)\ (Re_L)^{0.8}\ (Pr)^{0.33}$

(D) $h = 0.664\ (k/L)\ (Re_L)^{0.5}\ (Pr)^{0.33}$

17. If a mass of moist air in an air tight vessel is heated to a higher temperature, then :

(A) Specific humidity of air increases

(B) Specific humidity of air decreases

(C) Relative humidity of air increases

(D) Relative humidity of air decreases

18. In an ideal vapour compression refrigeration cycle, the specific enthalpy of refrigerant (in kJ/kg) at the following states is given as : Inlet of condenser = 283, Exit of condenser = 116, Exit of evaporator = 232. The COP of this cycle is :

(A) 3.75 (B) 2.27

(C) 3.27 (D) 2.75

19. Identify the type of hydraulic turbine to be selected for the following specifications : Power developed = 430 kW, Operating head = 400 m, Speed = 600 rpm :

(A) Pelton Turbine

(B) Kaplan turbine

(C) Francis Turbine

(D) Anyone can be selected

20. If a closed system is undergoing an irreversible process, the entropy of the system :

(A) Must increase

(B) Always remains constant

(C) Must decrease

(D) Can increase, decrease or remain constant

21. In order to have maximum power from a Pelton turbine, the bucket speed must be :

(A) Equal to the jet speed

(B) Equal to twice of jet speed

(C) Equal to the half of the jet speed

(D) None of the above

22. Under ideal conditions, isothermal, isobaric, isochoric and adiabatic processes are :

(A) Thermodynamic processes (B) Static processes

(C) Quasi-static processes (D) Dynamic processes

23. Consider the following two processes P and Q :

P : A heat source at 1200 K losses 2500 kJ of heat to a sink at 800 K.

Q : A heat source at 800 K losses 2000 kJ of heat to a sink at 500 K.

The correct statement for the above processes is :

(A) Process P is more irreversible than process Q

(B) Process Q is more irreversible than process P

(C) Irreversibility associated in both the processes are equal

(D) Both the processes are reversible

24. Constant pressure lines in the superheated region of the Mollier diagram will have :

(A) A positive slope (B) A negative slope

(C) Zero slope (D) Both positive and negative slope

25. If overhead clearance is less, then the following type of engine should be selected :

(A) V-type (B) In-line

(C) Vertical (D) Horizontal

26. Heat and work are :

(A) Point function (B) System properties

(C) Path function (D) Intensive properties

27. In steam and other vapour cycles, the process of removing non-condensable is called :

(A) Scavenging process (B) Deaeration process

(C) Exhaust process (D) Condensation process

28. The inlet valve of an IC Engine remains open for :

(A) 160º (B) 180º

(C) 230º (D) 270º

29. The Rateau steam turbine belongs to the category of :

(A) Pressure compounded turbine

(B) Reaction turbine

(C) Velocity compounded turbine

(D) Radial flow turbine

30. A gas turbine cycle with heat exchange and reheating improves :

(A) Only the thermal efficiency

(B) Only the specific power output

(C) Both thermal efficiency and specific power output

(D) Neither thermal efficiency nor specific power output

31. An ideal air standard Otto cycle has a compression ratio of 8.5. If the ratio of specific heats of air (γ) is 1.4, what is the thermal efficiency (in %) of the Otto cycle ?

(A) 57.5 (B) 10

(C) 20 (D) 95

32. What will be the nature of the graph lines of the equations $x + 3y - 2$ and $2x - y + 5$?

(A) Parallel (B) Coincident

(C) Intersecting (D) Perpendicular to each other

33. The concept of Eigen values and vectors is applicable to :

(A) Scalar matrix (B) Identity matrix

(C) Upper triangular matrix (D) Square matrix

34. The ordinary differential equation $\frac{d^2u}{dx^2} - 2x^2u + \sin(x) = 0$ is :

(A) Linear and homogeneous

(B) Linear and non-homogeneous

(C) Non-linear and homogeneous

(D) Non-linear and non-homogeneous

35. What is $\int_0^2 \frac{dx}{x^2+4}$ equal to :

(A) $\frac{\pi}{4}$ (B) $\frac{\pi}{8}$

(C) π (D) $\frac{\pi}{2}$

36. If 'm' is the mean of a Poisson Distribution, the standard deviation is given by :

(A) $\sqrt{m}$ (B) m^2

(C) $\frac{m}{2}$ (D) $m^{2/3}$

37. Poisson distribution is applied for :

(A) Uncertain Random Variable

(B) Discrete Random Variable

(C) Irregular Random Variable

(D) Continuous Random Variable

38. The procedure adopted in the Gauss-Jordan method in solving linear simultaneous equation is :

(A) It is required to assume initial approximate values of the variables.

(B) It reduces the given system of equations to a diagonal matrix.

(C) It reduces the given system of equations to an equivalent triangular system.

(D) The given matrix is factored into lower and upper triangular matrices.

39. The lateral displacement of string as a function of time and distance along the string is called wave equation and is classified as :

(A) Elliptic (B) Parabolic

(C) Hyperbolic (D) None of these

40. What is the area (in square units) of the parabola $y = x^2$ bounded by the line $y = 1$?

(A) $\frac{1}{3}$ (B) $\frac{2}{3}$

(C) 2 (D) $\frac{4}{3}$

41. Guest's theory of failure is applicable for the following type of materials :

(A) Brittle (B) Ductile

(C) Elastic (D) Plastic

42. The size of the butt welded joint is equal to :

(A) 2(throat of weld)

(B) 1.0(throat of weld)

(C) 0.707(throat of weld)

(D) 1.414(throat of weld)

43. In terms of Poisson's ratio (ν), the ratio of Young's Modulus (E) to Shear Modulus (G) of elastic materials is :

(A) $2(1 + \nu)$ (B) $2(1 - \nu)$

(C) $(1 + \nu)/2$ (D) $(1 - \nu)/2$

44. The notch angle of the Izod impact test specimen is :

(A) 30º (B) 40º

(C) 45º (D) 60º

45. Which one of the following materials is highly elastic ?

(A) Rubber (B) Brass

(C) Glass (D) Steel

46. Match List-I with List-II and select the correct answer using the codes given below the lists :

	List-I (Condition of Beam)		**List-II (Bending Moment Diagram)**
A	Subjected to bending moment at the end of a cantilever	1.	Triangle
B	Cantilever carrying uniformly distributed load over the whole length	2.	Cubic parabola
C	Cantilever carrying linearly varying load from zero at the fixed end to maximum at the free end	3.	Parabola
D	A beam having load at the centre and supported at the end	4.	Rectangle

Codes :

(A) A-4 B-1 C-2 D-3 (B) A-4 B-3 C-2 D-1

(C) A-3 B-4 C-2 D-1 (D) A-3 B-4 C-1 D-2

47. Two shafts having the same length and material are joined in series. If the ratio of the diameter of the first shaft to that of the second shaft is 2, then the ratio of the angle of twist of the first shaft to that of the second shaft is :

(A) 16 (B) 8

(C) 4 (D) 2

48. For steady-state forced vibrations, the phase lag at resonance is :

(A) 0º (B) 45º

(C) 90º (D) 180º

49. **Assertion (A)** : When an isotropic, linearly elastic material is loaded biaxially, the directions of principal stresses are different from those of principal strains.

Reason (R) : For an isotropic, linearly elastic material the Hooke's law gives only two independent material properties.

(A) Both (A) and (R) are individually true and (R) is the correct explanation of (A)

(B) Both (A) and (R) are individually true but (R) is not the correct explanation of (A)

(C) (A) is true but (R) is false

(D) (A) is false but (R) is true

50. In a gear the ratio of angle of action to the pitch angle is called :

(A) Angle of recess (B) Contact ratio

(C) Space width (D) Angle of approach

51. The unbalanced force caused due to reciprocating mass is given by the equation :

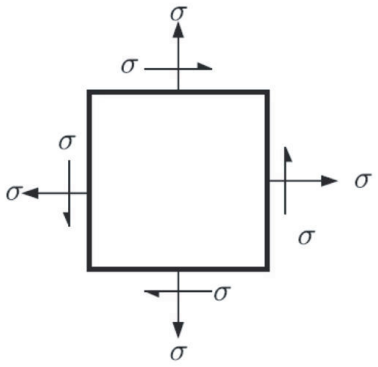
(A) $mr\omega^2 \sin\theta + mr\omega^2(\sin 2\theta / n)$

(B) $mr\omega^2 \sin\theta + mr\omega^2(\cos 2\theta / n)$

(C) $mr\omega^2 \cos\theta + mr\omega^2(\cos 2\theta / n)$

(D) $mr\omega^2(\sin\theta + \sin 2\theta / n)$

52. The maximum principal stress for the stress state shown in the figure is :



(A) σ (B) 2 σ

(C) 3 σ (D) 1.5 σ

53. The designation M 33 × 2 of a bolt means :

(A) Metric threads of 33 Nos. in 2 cm.

(B) Metric threads with cross-section of 33 mm

(C) Metric threads of 33 mm outside diameter and 2 mm pitch

(D) Bolt of 33 mm nominal diameter having 2 threads per cm

54. If the cross-section of a member is subjected to a uniform shear stress of intensity 'q', then the strain energy stored per unit volume is equal to (G = modulus of rigidity) :

(A) $q^2/2G$ (B) $2G/q^2$

(C) $2q^2/G$ (D) $G/2q^2$

55. Damping force is proportional to the :

(A) Displacement (B) Velocity

(C) Acceleration (D) None of these

56. The secondary force in a crank piston mechanism :

(A) arises due to obliquity of connecting rod

(B) acts at double the frequency as that of the primary force

(C) is smaller in magnitude than the primary force

(D) All of the above

57. Stress concentration is caused due to :

(A) Variation in properties of material from point to point in a member

(B) Pitting at points or areas at which loads on a member are applied

(C) Abrupt change of section

(D) All of the above

58. A cantilever beam of rectangular cross-section is 1 m deep and 0.6 m thick. If the beam were to be 0.6 m deep and 1 m thick, then the beam would :

(A) be weakened 0.5 times

(B) be weakened 0.6 times

(C) be strengthened 0.6 times

(D) have the same strength as the original beam because the cross-sectional area remains the same

59. Acceleration of a vibration is zero at the :

(A) Extreme left (B) Extreme right

(C) Mean position (D) Both (A) and (B)

60. The principal stresses σ_1, σ_2 and σ_3 at a point respectively are 80 MPa, 30 MPa and – 40 MPa. The maximum shear stress is :

(A) 25 MPa (B) 35 MPa

(C) 55 MPa (D) 60 MPa

61. Klein's construction is a graphical method of determining :

(A) Acceleration of various parts (B) Velocity of various parts

(C) Displacements of various parts (D) All of these

62. Beams of uniform strength vary in section such that :

(A) bending moment remains constant

(B) deflection remains constant

(C) maximum bending stress remains constant

(D) shear force remains constant

63. In vibration isolation if $\frac{\omega}{\omega_n} < \sqrt{2}$, then the transmissibility will be :

(A) Less than one (B) Equal to one

(C) Equal to zero (D) Greater than one

64. Match List-I with List-II and select the correct answer using the codes given below:

List-I		**List-II**
(A) Helical gear	1	Non-interchangeable
(B) Herringbone gears	2	Zero axial thrust
(C) Worm gears	3	Quit motion
(D) Hypoid gears	4	Extreme speed reduction

Codes :

(A) A-1 B-2 C-3 D-4 (B) A-3 B-2 C-1 D-4

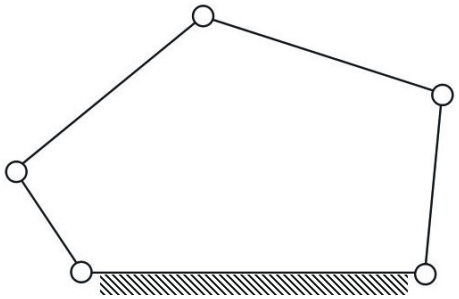
(C) A-3 B-2 C-4 D-1 (D) A-3 B-1 C-4 D-2

65. When the sleeve of a Porter governor moves upwards, the governor speed :

(A) Increases (B) Decreases

(C) Remains unaffected (D) None of these

66. The number of degree of freedom of mechanism shown in figure is :



(A) 4 (B) 3

(C) 2 (D) 1

67. In order to avoid tearing of the plate at edge, the distance from the centre line of the rivet hole to the nearest edge of the plate in terms of dia. of rivet d should be equal to :

(A) d (B) $1.25d$

(C) $1.5d$ (D) $2d$

68. The included angle in unified of American National threads is :

(A) 60º (B) 55º

(C) 45º (D) 29º

69. The property of a material which enables it to resist fracture due to high impact loads is known as :

(A) Resilience (B) Endurance

(C) Strength (D) Toughness

70. Which of the following mechanisms is an approximately straight-line motion mechanism ?

(A) Hart's mechanism
(B) Watt's mechanism
(C) Scott-Russell's mechanism
(D) Peaucellier mechanism

71. A hacksaw blade cuts on the :

(A) Forward stroke
(B) Both forward and return strokes
(C) Return stroke
(D) Cutting depends upon the direction of force

72. The temperature at which the new grains are formed in the metal is called :

(A) Lower critical temperature
(B) Upper critical temperature
(C) Eutectic temperature
(D) Recrystallisation temperature

73. Shift is a casting defect which :

(A) Results in a mismatching of the top and bottom parts of a casting
(B) Results in general enlargement of a casting
(C) Occurs near the ingates as rough lumps on the surface of a casting
(D) Occurs as sand patches on the upper surface of a casting

74. The brass and bronze are welded by.....flame.

(A) Neutral (B) Oxidizing

(C) Carburising (D) All of these

75. The advantage(s) of Thermit welding is(are) that :

(A) All parts of the weld section are molten at the same time

(B) Weld cools almost uniformly

(C) Results in a minimum problem with internal residual stresses

(D) All of the above

76. The surface to be left unmachined is marked on the pattern by :

(A) Red colour (B) Yellow colour

(C) Black colour (D) Blue colour

77. The main purpose of spheroidising treatment is to improve :

(A) Hardenability of low carbon steels

(B) Machinability of low carbon steels

(C) Hardenability of high carbon steels

(D) Machinability of high carbon steels

78. The metal extrusion process is generally used for producing :

(A) Uniform solid sections

(B) Uniform solid and hollow sections

(C) Uniform hollow sections

(D) Varying solid and hollow sections

79. In order to have interference fit, it is essential that the lower limit of the shaft should be :

(A) Greater than the upper limit of the hole

(B) Lesser than the upper limit of the hole

(C) Greater than the lower limit of the hole

(D) Lesser than the lower limit of the hole

80. Work study comprises the following main techniques :

(A) Method study and work measurement

(B) Method study and time study

(C) Time study and work measurement

(D) Method study and job evaluation

81. At the break-even point :

(A) Total cost is more than the sales revenue

(B) Total cost is less than the sales revenue

(C) Total cost is equal to sales revenue

(D) Fixed cost is equal to variable cost

82. Metal patterns are used for :

(A) Small castings

(B) Complicated castings

(C) Large castings

(D) Large scale production of castings

83. Cutting and forming operations can be performed in a single operation in a :

(A) Simple die (B) Progressive die

(C) Compound die (D) Combination die

84. Structural sections such as rails, angles, I-beams are made by :

(A) Hot rolling (B) Hot drawing

(C) Hot piercing (D) Hot extrusion

85. In blanking operation, the clearance is provided on :

(A) Punch

(B) Half on the punch and half on the die

(C) Die

(D) Either on punch or die depending upon designer's choice

86. Product layout is best suited where :

(A) One type of product is produced

(B) Product is standardized

(C) Product is manufactured in large quantities

(D) All of the above

87. The percentage of carbon in grey cast iron is in the range of :

(A) 0.25 to 0.75% (B) 1.25 to 1.75%

(C) 3 to 4% (D) 8 to 10%

88. The cold working of metals is carried out :

(A) At the recrystallisation temperature

(B) Below the recrystallisation temperature

(C) Above the recrystallisation temperature

(D) At any temperature

89. Which of the following processes has highest rate of metal removal ?

(A) Electric Discharge Machining (EDM)

(B) Electro-Chemical Machining (ECM)

(C) Ultrasonic Machining (USM)

(D) Laser Beam Machining (LBM)

90. Projection welding is a :

(A) Continuous spot welding process

(B) Multi-spot welding process

(C) Arc welding process

(D) Process used for joining round bars

91. Several machine tools can be controlled by a central computer in :

(A) NC (Numerical Control) machine tool

(B) CNC (Computer Numerical Control) machine tool

(C) DNC (Direct Numerical Control) machine tool

(D) NC (Numerical Control) machining centre

92. Good surface finish and better dimensional accuracy can be achieved in :

(A) Cold working process (B) Hot working process

(C) Both (A) and (B) (D) None of these

93. Which of the following engineering materials is the most suitable candidate for hot chamber die casting ?

(A) Low carbon steel (B) Titanium

(C) Copper (D) Tin

94. The two-bin system is concerned with :

(A) Ordering procedure

(B) Production planning

(C) Forecasting sales

(D) Despatching and expediting

95. The consumable electrode is used in :

(A) Carbon arc welding (B) Submerged arc welding

(C) TIG arc welding (D) MIG arc welding

96. The mechanism of material removal in EDM process is :

(A) Melting and Evaporation

(B) Melting and Corrosion

(C) Erosion and Cavitation

(D) Cavitation and Evaporation

97. In metal cutting operation, maximum heat is generated in :

(A) The chip-tool interface zone (B) The shear zone

(C) The tool-work interface zone (D) None of these

98. The flux commonly used in brazing is :

(A) Zinc chloride

(B) Ammonium chloride

(C) Resin plus alcohol

(D) Borax

99. A two high rolling mill consists of two rolls which rotates :

(A) At the same speed and in the same direction

(B) At the same speed but in opposite direction

(C) At different speeds and in the same direction

(D) At different speeds and in the opposite direction

100. The welding set up is said to have straight polarity, when :

(A) Work is connected to the positive terminal and the electrode holder to the negative terminal.

(B) Work is connected to the negative terminal and the electrode holder to the positive terminal.

(C) Work is connected to the positive terminal and the electrode holder is earthed.

(D) Work is connected to the negative terminal and the electrode holder is earthed.

GENERAL APTITUDE

101. Direction : Read the given instructions carefully and answer the question below :

A + B (5) = A is 10 m to the NORTH of B

A – B (7) = A is 12 m to the SOUTH of B

A * B (12) = A is 17 m to the EAST of B

A / B (11) = A is 16 m to the West of B.

R / P (13), P / Q (19) , S + Q (5), U / S (19), U – T (5)

What is the direction of S with respect to R ?

(A) East (B) West

(C) North-East (D) South-East

102. Complete the series :

6, 13, 28, 59, ?

(A) 98 (B) 108

(C) 118 (D) 122

103. Direction : Study the following information carefully and answer the question given below :

There are seven family members in a family in which four are males and three are females and two married couple in that family. S is the brother-in-law of T and paternal uncle of P. R is the father of V and son of M. V is sister of P and Q is grandfather of V.

Who is the mother of V ?

(A) R (B) M

(C) S (D) T

104. Direction : Read the following information carefully and answer the question given below :

"Backlog disc live heavily" is coded as " 2$A 4#I 8$E 12#I "

"Innocent band actress salute" is coded as " 2#A 1$C 9%N 19&A"

"Notify selfish model change" is coded as "14&O 13!O 19$E 3&H"

"Langer hill external limelight" is coded as "12&A 12@I 8#I 5%X"

Find the code for "Easy goals fulfilled".

(A) 5#A 6!O 7@U (B) 7$A 8!O 6@U

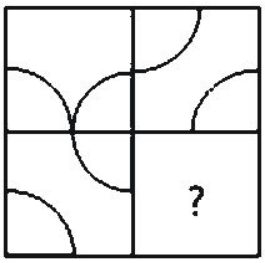
(C) 5#A 7!O 6@U (D) 5$A 7!O 6%U

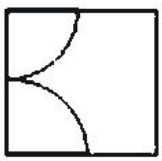
105. Dominance : Hegemony :: Independence : ?

(A) Autonomy (B) Sympathy

(C) Melancholy (D) Recompense

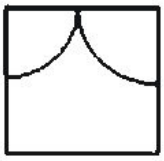
106. Directions : Which answer figure will complete the pattern of the given incomplete figure ?



(A) 

(B) 

(C) 

(D) 

107. Direction : Read the following information carefully and answer the question given below :

8 persons from A to H sit around a square table such that 2 persons sit in the middle of each of the sides. The persons sitting on one side of the table face the persons sitting exactly opposite to them on the opposite side of table.

A sits on the immediate right of E. G faces the one who is second to the left of B. 3 persons sit between A and G. Two persons sit between F and D (when counted from one side only), who is adjacent to E. Only one person sits between G and C (when counted from one side only). A is not adjacent to F.

How many persons sit between E and F ?

(A) 4 (B) 3

(C) 2 (D) 1

108. In the following question, there is a statement followed by two arguments I and II. Read carefully and choose the right option from the given possible answers :

Give answers :

(a) Only argument I is strong (b) Only argument II is strong

(c) Either I or II is strong (d) Neither I nor II is strong

Statement—Should there be reservation of seats and posts on communal basis ?

Arguments—

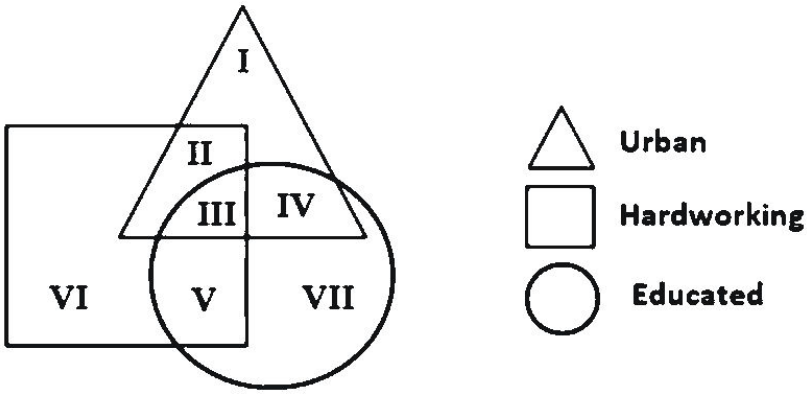
I. Yes, it will check most of the intercommunal biases.

II. No, ours is a secular state.

(A) a (B) b

(C) c (D) d

109. Which one of the area marked represents the urban educated who are not hardworking ?



(A) IV

(B) III

(C) II

(D) I

110. Arrange the words given below in a meaningful sequence :

1. Puberty
2. Adulthood
3. Childhood
4. Infancy
5. Senescence
6. Adolescence

(A) 2, 4, 6, 3, 5, 1

(B) 4, 3, 1, 6, 2, 5

(C) 4, 3, 6, 1, 2, 5

(D) 6, 2, 4, 3, 1, 5

GENERAL ENGLISH

111. **Direction** : Which of the phrases given below should replace the phrase given in bold in the following sentence to make the sentence grammatically correct ?

A budget **should have to mould** by the needs of a nation.

(A) should be moulded (B) should have mould

(C) should mould (D) should be moulding

112. The five sentences given in this question, when properly sequenced, form a coherent paragraph. Decide on the proper order for the sentences and key in this sequence of five numbers as your answer :

1. The process of handing down implies not a passive transfer, but some contestation in defining what exactly is to be handed down.
2. Wherever Western scholars have worked on the Indian past, the selection is even more apparent and the inventing of a tradition much more recognizable.
3. Every generation selects what it requires from the past and makes its innovations, some more than others.
4. It is now a truism to say that traditions are not handed down unchanged, but are invented.
5. Just as life has death as its opposite, so is tradition by default the opposite of innovation.

(A) 4 5 2 3 1 (B) 5 4 2 3 1

(C) 4 5 1 3 2 (D) 5 4 1 3 2

113. Fill in the blank :

People with recurrent migraine are always looking.....a way to end their pain.

(A) for (B) into

(C) on (D) at

114. **Direction** : The given sentence has been broken up into four different parts. The error, if any, will be in any one part of the sentence. Select the option which contains the part of the sentence which has an error (spelling, grammatical or contextual) :

My uncle said that (A)/he would reach to (B)/the bus stand with all his (C)/ belongings within an hour. (D)/

(A) My uncle said that

(B) he would reach to

(C) the bus stand with all his

(D) belongings within an hour

115. **Direction** : The following question has two blanks, each blank indicating that something has been omitted. Choose the set of words for each blank that best fits in the context of the sentence :

The goods and services tax creates.....trails across the income and production chain, and is driving.....of the economy and better measures of MSME value addition and cash flow.

(A) assessment, securitization

(B) audit, formalization

(C) withering, work

(D) inspection, denizens

116. Find the correctly spelt word :

(A) Alienate (B) Allienate

(C) Aliennate (D) Alienatte

117. In the following question, out of the four alternatives, select the alternative which best expresses the meaning of the idiom/phrase :

Bear the palm

(A) To meet death

(B) To win

(C) To face the consequences

(D) To be able to predict future

118. Out of the four alternatives choose the one which can be substituted for the given words/sentence in the question :

A person without a home, job or property

(A) Derelict (B) Hoary

(C) Coy (D) Prattle

119. Find the antonym of ROTUND :

(A) Round (B) Unimportant

(C) Thin (D) Dull

120. Find the synonym of REVERIE :

(A) Palimpsest (B) Phantom

(C) Daydream (D) Curio