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T.B.C. : ASNP-O-GSEA

Test Booklet Series

Serial No.	**TEST BOOKLET**	**A**
0071597	**GENERAL STUDIES AND ENGINEERING APTITUDE**	

Time Allowed : Two Hours

Maximum Marks : 200

INSTRUCTIONS

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET *DOES NOT* HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS, ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.

2. **PLEASE NOTE THAT IT IS THE CANDIDATE'S RESPONSIBILITY TO ENCODE AND FILL IN THE ROLL NUMBER AND TEST BOOKLET SERIES CODE A, B, C OR D CAREFULLY AND WITHOUT ANY OMISSION OR DISCREPANCY AT THE APPROPRIATE PLACES IN THE *OMR* ANSWER SHEET. ANY OMISSION/DISCREPANCY WILL RENDER THE ANSWER SHEET LIABLE FOR REJECTION.**

3. You have to enter your Roll Number on the Test Booklet in the Box provided alongside. *DO NOT* write *anything else* on the Test Booklet.

4. This Test Booklet contains **100** items (questions). Each item comprises four responses (answers). You will select the response which you want to mark on the Answer Sheet. In case, you feel that there is more than one correct response, mark the response which you consider the best. In any case, choose **ONLY ONE** response for each item.

5. You have to mark your responses **ONLY** on the separate Answer Sheet provided. See directions in the Answer Sheet.

6. All items carry equal marks.

7. Before you proceed to mark in the Answer Sheet the response to various items in the Test Booklet, you have to fill in some particulars in the Answer Sheet as per instructions sent to you with your Admission Certificate.

8. After you have completed filling in all your responses on the Answer Sheet and the examination has concluded, you should hand over to the Invigilator *only the Answer Sheet*. You are permitted to take away with you the Test Booklet.

9. Sheets for rough work are appended in the Test Booklet at the end.

10. **Penalty for wrong Answers :**
    THERE WILL BE PENALTY FOR WRONG ANSWERS MARKED BY A CANDIDATE.
    (i) There are four alternatives for the answer to every question. For each question for which a wrong answer has been given by the candidate, **one-third** of the marks assigned to that question will be deducted as penalty.
    (ii) If a candidate gives more than one answer, it will be treated as **wrong answer** even if one of the given answers happens to be correct and there will be same penalty as above to that question.
    (iii) If a question is left blank i.e. no answer is given by the candidate, there will be **no penalty** for that question.

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1. Which one of the following is the advantage of an 'equity capital'?

   (a) Dividends paid by a company are not tax deductible

   (b) Equity holders expect greater return as they undertake more risk

   (c) Equity shares are not repayable to the shareholders as these are nonrefundable

   (d) Issue of equity shares also result in dilution of control of the company

2. Which one of the following branch of economics is focusing on improving fiscal, economic and social conditions in developing (low income) countries?

   (a) Social economics

   (b) Fiscal economics

   (c) Development economics

   (d) Micro economics

3. Which one of the following is correct with respect to the Industrial Relations Bill?

   (a) Workers can raise objection to retrenchment within five years

   (b) Government consent required for workers to move courts in case conciliation fails

   (c) Trade union deemed registered if application not processed within six months by government

   (d) Labour court, board of arbitration and tribunal court won't exist; only industrial tribunal to continue

4. What is PPP in sustainable agricultural sector?

   (a) Public Product Percentage

   (b) Present Product Partnership

   (c) Public Private Partnership

   (d) Present Private Percentage

5. Which one of the following is an effort to get to the next stage of creating a pan-India electronic portal, which networks the existing APMC mandis by creating a national market for agricultural commodities?

   (a) National APMC Market

   (b) National Agricultural Market

   (c) National Network Portal

   (d) National Electronic Portal

6. Which one of the following Yojanas replaces two schemes – National Agricultural Insurance Scheme (NAIS), 1999 as well as the Modified National Agricultural Insurance Scheme (MNAIS), 2010 – by incorporating the best features of all these schemes while removing the previous short-comings and weaknesses?

   (a) Pradhan Mantri Krishi Sinchayee Yojana

   (b) Pradhan Mantri Fasal Sinchayee Yojana

   (c) Pradhan Mantri Krishi Bharat Yojana

   (d) Pradhan Mantri Fasal Bima Yojana

7. Which one of the following is **not** the principle of India's Foreign Policy for Panchsheel ?

   (a) Mutual non-interference in each other's affairs

   (b) Mutual contentions

   (c) Equality and mutual benefit

   (d) Peaceful co-existence

8. Government's strategy in respect of public expenditure and revenue can have significant impact on the business is called

   (a) Monetary policy

   (b) Fiscal policy

   (c) Trade policy

   (d) Industrial policy

9. Which of the following arguments advanced in favour of labour-intensive techniques ?

   1. In underdeveloped countries there is an acute shortage of capital and entrepreneurial resources

   2. There is considerable saving in foreign exchange

   3. These techniques quickly increase the supply of consumable goods and obviate the danger of inflation

   4. More employment will be offered to the labour force in the long run

   (a) 1, 2 and 4 only

   (b) 1, 3 and 4 only

   (c) 1, 2 and 3 only

   (d) 2, 3 and 4 only

10. Which of the following features regarding 'Shram Suvidha Portal' are correct ?

    1. Unique labour identification number (LIN) will be allotted to units to facilitate online registration

    2. Mandatory uploading of inspection reports within 72 hours by labour inspectors

    3. Timely redressal of grievances will be ensured with the help of the portal

    (a) 1, 2 and 3

    (b) 1 and 2 only

    (c) 1 and 3 only

    (d) 2 and 3 only

11. Three pipes A, B and C can fill a tank in 6 hours. When the tank was empty, all the three pipes were turned on and they worked together for 2 hours, at that instant, pipe C was closed and the pipes A and B continued to work to fill the tank. It took a total of 7 hours from start to fill the tank this way. If pipe C alone is working from the start, the time it takes will be

    (a) 10 hours

    (b) 14 hours

    (c) 30 hours

    (d) 45 hours

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12. The given number of letters skipped increase in the order of 2, 4, 6, 8, ... Which of the following series observes the rule given ?

   (a) *ADIOVF*

   (b) *BEJQZK*

   (c) *DGKOTX*

   (d) *GIKMOQ*

13. The weight of 3 mangoes and 2 apples is 255 *grams*. The weight of 2 mangoes and 3 apples is 285 *grams*. Each mango weighs the same and each apple weighs the same. The combined weight of 1 mango and 1 apple will be

   (a) 98 *grams*

   (b) 104 *grams*

   (c) 108 *grams*

   (d) 114 *grams*

14. A builder decided to build a farm-house in 40 *days*. He employed 100 *men* in the beginning and 100 more after 35 *days* and completed the construction in the stipulated time. If he had not employed additional men, how many days behind the schedule the construction would have been finished ?

   (a) 2 *days*

   (b) 5 *days*

   (c) 10 *days*

   (d) 15 *days*

15. Two trains 120 *m* and 80 *m* length are running in opposite direction with velocities 42 *km/hour* and 30 *km/hour* respectively. To cross each other completely, the time taken will be

   (a) 10 *sec*

   (b) 15 *sec*

   (c) 18 *sec*

   (d) 20 *sec*

16. One student gets 20% of *marks* in an examination and fails by 30 *marks*. Another student secures 32% of marks and gets 42% *marks* more than that required to pass. The percentage of marks required to pass in that examination will be

   (a) 22% of *marks*

   (b) 25% of *marks*

   (c) 28% of *marks*

   (d) 30% of *marks*

17. A concrete post, planted vertically in a lake is seen with its top 7 *m* projecting above the water surface. If its $\frac{1}{3}$, $\frac{1}{4}$ and $\frac{1}{8}$ parts of the length are in water, mud and sand respectively, the length of the post will be

   (a) 24 *m*

   (b) 27 *m*

   (c) 36 *m*

   (d) 42 *m*

18. The value of a machine depreciates every year by 5%. If the present value of the machine be ₹100,000, its value after 3 *years* will be nearly

(a) ₹95,198

(b) ₹90,376

(c) ₹87,556

(d) ₹85,738

19. A construction work is to be completed in 46 *days* by 117 *men* at work, 8 *hours* being the working period per day. After 33 *days*, it is found that only $\frac{4}{7}$ of the work is completed. If the working time is increased to 9 *hours/day*, the number of additional men required to complete the work in 46 *days* period will be

(a) 72 *men*

(b) 81 *men*

(c) 90 *men*

(d) 99 *men*

20. A man spends $\frac{2}{5}$ of his salary on groceries and $\frac{3}{10}$ of the remaining on his clothes. If he saves ₹10,500, his monthly salary will be

(a) ₹30,000

(b) ₹15,000

(c) ₹20,000

(d) ₹25,000

21. In a triangle ABC, if the values of $a = 3$, $b = 4$ and $\sin A = \frac{3}{4}$, then the angle $\angle B$ will be

(a) 30°

(b) 45°

(c) 60°

(d) 90°

22. In an area of an ellipse, if one percent error is made in measuring the major and minor axis, the percentage error will be

(a) 2%

(b) 3%

(c) 4%

(d) 5%

23. Consider the following equation :
$$R = a(1 - \cos\theta)$$
The volume of the solid generated by the revolution of the cardioid about the initial line will be

(a) $\dfrac{3\pi a^2}{8}$

(b) $\dfrac{3\pi a^3}{8}$

(c) $\dfrac{8\pi a^2}{3}$

(d) $\dfrac{8\pi a^3}{3}$

24. In how many ways can 5 prizes be distributed among 4 candidates when every candidate can take one or more prizes ?

   (a) 1024

   (b) 625

   (c) 600

   (d) 120

25. Consider the following equation :

   $(x + y + 1) dx + (2x + 2y + 3) dy = 0$

   Solving the equation will be

   (a) $u - log(u + 1) = x + c$

   (b) $2u + log(u - 1) = x + c$

   (c) $2u - log(u + 1) = x + c$

   (d) $u + log(u - 1) = x + c$

   where : u is $(x + y + 1)$

26. If 8 *children* and 8 *men* complete certain job in 6 *days* and if each child takes *twice* the time taken by a man to finish the same work, in how many days 8 *men* will finish the same work ?

   (a) 12 *days*

   (b) 10 *days*

   (c) 9 *days*

   (d) 8 *days*

27. Consider the following matrix :

$$A = \begin{bmatrix} -2 & 2 & -3 \\ 2 & 1 & -6 \\ -1 & -2 & 0 \end{bmatrix}$$

   The Eigen values are

   (a) −3, −3 and 5

   (b) −3, 3 and −5

   (c) 3, 3 and −5

   (d) 3, −3 and 5

28. If at a get-together 22 people shake their hands with each other, how many handshakes will take place in all ?

   (a) 132

   (b) 231

   (c) 321

   (d) 484

29. If $\vec{v} = (xyz)\hat{i} + (3x^2 y)\hat{j} + (xz^2 - y^2 z)\hat{k}$, the value of divergence of $\vec{v}$ at point $(2, -1, 1)$ will be

   (a) 14

   (b) 16

   (c) 18

   (d) 20

30. The square root of the complex number $5 + 12i$ will be

(a) $3 + 2i$, $-3 - 2i$

(b) $2 - 3i$, $-2 - 3i$

(c) $3 - 2i$, $3 + 2i$

(d) $2 + 3i$, $2 - 3i$

31. About 80% of the failures of mechanical components are due to which one of the following failure resulting from the fluctuating stresses ?

(a) Shear failure

(b) Fatigue failure

(c) Dynamic load failure

(d) Normal shear failure

32. Consider the following steps regarding basic procedure of design of machine element :

   1. Select suitable material for element

   2. Specify functions of elements

   3. Determine failure mode of element

   4. Determine forces acting on element

What is the correct sequence of these steps ?

(a) 2, 4, 1 and 3

(b) 1, 2, 3 and 4

(c) 2, 1, 4 and 3

(d) 4, 2, 3 and 1

33. A plane oblique to axis and making same angle with axis as elements do is called

(a) Circle

(b) Ellipse

(c) Parabola

(d) Hyperbola

34. Which of the following projections is not a type of parallel projection ?

(a) Conic projection

(b) Oblique projection

(c) Orthogonal projection

(d) Curvilinear projection

35. When the receding lines are drawn to full size scale and the projectors inclined at an angle of 30° or 45° or 60° to the plane of projection, such oblique projection is known as

(a) Cavalier projection

(b) Cabinet projection

(c) Parallel projection

(d) Isometric projection

36. When an observer looks towards an object from infinity, the lines of sights (projectors) will be parallel to each other and inclined to the plane of projection. The resulting projection is known as

(a) Isometric projection

(b) Orthographic projection

(c) Oblique projection

(d) Axonometric projection

37. Which one of the following systems is recommended in general rules for dimensioning ?

(a) Aligned system

(b) Bidirectional system

(c) Multidirectional system

(d) Unidirectional system

38. Any safety programme will be ineffective if any attempt is made to control accidents without first creating

1. Proper safety philosophy

2. Teaching safety principles

3. Eliminating mis-conceptions about the causes of accidents

(a) 1 and 2 only

(b) 1 and 3 only

(c) 2 and 3 only

(d) 1, 2 and 3

39. The Mechanical Engineering designer's problem is to attempt to minimize the factors that affect the fatigue life; these are

1. Electrolyte concentration

2. Temperature

3. Fluid flow rate around specimen

(a) 1, 2 and 3

(b) 1 and 2 only

(c) 1 and 3 only

(d) 2 and 3 only

40. Which of the following statements are correct with respect to mechanical design categories ?

1. Failure of the part would endanger human life, or the part is made in extremely large quantities; consequently, an elaborate testing program is justified during design

2. The part is made in less quantities that a moderate series of tests is feasible

3. The part is made in such small quantities that testing is not justified at all; or the design must be completed so rapidly that there is not enough time for testing

(a) 1 and 2 only

(b) 1 and 3 only

(c) 2 and 3 only

(d) 1, 2 and 3

41. Which one of the following management functions is correct during the preproduction phase ?

(a) Organize

(b) Control

(c) Plan

(d) Staff

42. Which one of the following charts is used in the control charts for monitoring service quality characteristics for number of daily customer complaints in a hotel ?

(a) R-chart

(b) $\bar{X}$-chart

(c) p-chart

(d) c-chart

43. The reliability number in sampling process is

(a) $100 + \left[\dfrac{Number\ of\ defective\ units}{Number\ of\ units\ tested} \times 100 \right]$

(b) $100 - \left[\dfrac{Number\ of\ defective\ units}{Number\ of\ units\ tested} + 100 \right]$

(c) $100 - \left[\dfrac{Number\ of\ defective\ units}{Number\ of\ units\ tested} \times 100 \right]$

(d) $100 + \left[\dfrac{Number\ of\ defective\ units}{Number\ of\ units\ tested} - 100 \right]$

44. Which of the following are the noise factors for the experiment on the 'Elastomeric Connector' ?

1. Conditioning time

2. Interference

3. Conditioning temperature

4. Connector wall thickness

(a) 1 and 2 only

(b) 2 and 4 only

(c) 3 and 4 only

(d) 1 and 3 only

45. Which of the following are the internal factors that influence customer perception of service quality ?

1. Knowledge explosion

2. Annual and quarterly reports

3. Social values and changes in lifestyle

4. Increase consumer participation in service delivery through motivated employees

(a) 1 and 3 only

(b) 1 and 4 only

(c) 2 and 4 only

(d) 2 and 3 only

46. Which one of the following statements is correct regarding TQM ?

(a) It proposes hierarchical organization structure

(b) It has a result oriented approach

(c) Its technical efficiency and cost cutting approaches are dominant

(d) It advocates a flatter organization structure with large span of control where authority is pushed as far down as possible

47. Which of the following are the core steps of 'Six Sigma' methodology ?

(a) Improve, control and measure

(b) Define, measure and analyze

(c) Design, verify and control

(d) Measure, analyze and define

48. Which one of the following is the correct UCL for central limits of non-confirming units with constant or variable sample size in control charts for attributes ?

(a) $\overline{P} + \sqrt{3 \dfrac{\overline{P}(1-\overline{P})}{n}}$

(b) $\overline{np} + 3\sqrt{np(1-\overline{p})}$

(c) $\overline{c} + 3\sqrt{\overline{c}}$

(d) $\overline{u} + 3\sqrt{\dfrac{\overline{u}}{n}}$

49. Which one of the following relation is correct for np regarding quality control ?

(a) $\dfrac{Total\ number\ rejected\ /defective}{Number\ of\ sample}$

(b) $\dfrac{Total\ number\ rejected\ /defective}{Total\ number\ inspected}$

(c) $\dfrac{Total\ number\ defects\ in\ all\ units}{Total\ number\ of\ units}$

(d) $\dfrac{Total\ number\ defects\ in\ all\ units}{Number\ of\ sample}$

50. Nitrate when present in excess in drinking water causes

(a) Fluorosis

(b) Minamata

(c) Blur baby syndrome

(d) Itai-itai

51. Microorganisms which can produce organic matter to some extent through oxidation of certain chemicals in the absence of sunlight are known as

(a) Photo-autotrophs

(b) Chemo-autotrophs

(c) Micro-autotrophs

(d) Oxi-autotrophs

52. The downstream concentration *CI* in a mathematical model of simple water quality mixing with respect to *EIA* methodologies is

(a) $\dfrac{Q_o C_o + Q_e C_e}{Q_o + Q_e}$

(b) $\dfrac{Q_o C_o - Q_e C_e}{Q_o + Q_e}$

(c) $\dfrac{Q_o C_o + Q_e C_e}{Q_o - Q_e}$

(d) $\dfrac{Q_o C_o - Q_e C_e}{Q_o - Q_e}$

where :

Q_e is the effluent flow

Q_o is the upstream flow

C_e is the effluent concentration

C_o is the upstream concentration

53. The available wind power P_a in an aero-turbine is

(a) $\dfrac{1}{8} \rho \pi D^2 V^3$

(b) $\dfrac{3}{8} \rho \pi D^3 V^2$

(c) $\dfrac{1}{8} \rho \pi D^3 V^2$

(d) $\dfrac{3}{8} \rho \pi D^2 V^3$

where :

V is the velocity of air

D is the diameter of circular flow

ρ is the density of air

54. 'Algal Bloom' is, when unusually large concentrations of

(a) Nutrients are present in water bodies; an excess growth of algae appears

(b) Planktons are present in water bodies; an excess growth of algae appears

(c) Bacteria are present in water bodies; an excess growth of algae appears

(d) Oxygen is present in water bodies; an excess growth of algae appears

55. The correct sequence of the components of biological diversity or biodiversity in the hierarchy of eco-system is

(a) Landscape, Population, Species, Community and Gene

(b) Community, Landscape, Population, Species and Gene

(c) Landscape, Community, Population, Species and Gene

(d) Community, Population, Landscape, Species and Gene

56. The geometrical shape or form of the smoke coming out of a chimney is called

(a) Fume

(b) Fog

(c) Plume

(d) Smog

57. A situation when there is a prolonged period of inadequate rain fall, marked with erratic distribution of the same over time and space, is called

(a) Agricultural drought

(b) Ecological drought

(c) Hydrological drought

(d) Meteorological drought

58. The process of converting the solid wastes-sewage sludge, domestic and agricultural wastes into compost manure is called

(a) Sericulture

(b) Ployculture

(c) Bio-digester

(d) Vermiculture

59. A mass movement in which material moves along a curved surface of rupture (slow or moderately rapid movement of a coherent body of rock) is called

(a) Soil creep

(b) Slump

(c) Rockslide

(d) Earth creep

60. A layout which is designed in such a way that the entire process of receiving raw materials, processing and the outward movement of the finished goods takes place smoothly and efficiently is called

(a) Transport layout

(b) Organizational layout

(c) General functional layout

(d) Utilities layout

61. Which one of the following phases is predominantly a testing and final standardization effort so that operations can begin in project management ?

(a) Conceptual phase

(b) Production phase

(c) Operational phase

(d) Evaluation phase

62. Which one of the following float of an activity is the spare time available for that activity, if that activity is started as late as possible and is finished as early as possible ?

(a) Total float

(b) Independent float

(c) Free float

(d) Slack

63. If the nominal rate of interest is 12% and is compounded quarterly, the effective rate of interest will be

(a) 10·6% per annum

(b) 12·6% per annum

(c) 14·4% per annum

(d) 16·4% per annum

64. Which one of the following approaches is available to estimate the rate of returns required by the equity share-holder ?

(a) Dividend growth approach

(b) Dividend reinvestment approach

(c) Dividend capitalization approach

(d) Dividend pricing model approach

65. An assessment of comparative strength and weaknesses of a business firm in relation of competitions on one hand and the environmental opportunities and threats which a firm may be exposed to face is carried through

(a) Time-series analysis

(b) Cost-benefit analysis

(c) SWOT analysis

(d) Profit analysis

66. Which of the following is not considered as fundamental dimension of project plans ?

(a) Time

(b) Cost

(c) Scope

(d) Quality

67. The shadow price of a unit of foreign exchange is

(a) $\sum_{i=1}^{n} F_i Q_i P_i$

(b) $\sum_{i=1}^{n} F_i + Q_i + P_i$

(c) $\sum_{i=1}^{n} F_i + Q_i - P_i$

(d) $\sum_{i=1}^{n} F_i - Q_i + P_i$

where :

P_i is domestic market clearing price of a commodity i

Q_i is quantity of commodity i bought with one unit foreign exchange

F_i is fraction of foreign exchange, at margin spent on importing commodity

68. An Income Elasticity of Demand e_i is

(a) $\dfrac{Q_2 - Q_1}{I_2 - I_1} \times \dfrac{I_2 + I_1}{Q_2 + Q_1}$

(b) $\dfrac{Q_2 + Q_1}{I_2 - I_1} \times \dfrac{I_2 + I_1}{Q_2 + Q_1}$

(c) $\dfrac{Q_2 - Q_1}{I_2 + I_1} \times \dfrac{I_2 - I_1}{Q_2 + Q_1}$

(d) $\dfrac{Q_2 - Q_1}{I_2 + I_1} \times \dfrac{I_2 + I_1}{Q_2 + Q_1}$

where :

Q_1 is quantity demanded in the base year

Q_2 is quantity demanded in the following year

I_1 is income level in the base year

I_2 is income level in the following year

69. Consider the following data :

Atomic radius of copper = $1 \cdot 278$ $\mathring{A}$,

$A_W = 63 \cdot 54$, $N_e = 4$, $N_A = 6 \cdot 023 \times 10^{23}$

The density of the copper will be nearly

(a) 9 $gram/cm^3$

(b) 7 $gram/cm^3$

(c) 5 $gram/cm^3$

(d) 3 $gram/cm^3$

70. The Knoop's Hardness Number (*KHN*) is

(a) $\dfrac{PC}{L^2}$

(b) $\dfrac{P}{L^2 C}$

(c) $\dfrac{P + C}{L^2}$

(d) $\dfrac{P}{L^2 - C}$

where :

L is the length of the long diagonal

C is the constant related to the length of projected area for each indenter

P is the applied load

71. Ceramic raw materials are joined using a binder that does not require firing or sintering in a process called

(a) Coating

(b) Cementation

(c) Enamel

(d) Slip casting

72. For many alloy systems at specific temperature, a maximum concentration of solute atoms that dissolve in the solvent to form a solid solution is

(a) Equilibrium of alloy

(b) Free energy

(c) System

(d) Solubility limit

73. The long chain molecules are randomly oriented in

   (a) Plastic

   (b) Metal

   (c) Diamond

   (d) Coal

74. In which one of the following dislocations, an extra portion of a plane of atoms or half plane, the edge of which terminates within the crystal ?

   (a) Screw dislocation

   (b) Edge dislocation

   (c) Mixed dislocation

   (d) Burgers dislocation

75. The bond that is formed between water molecules due to attraction between the positively-charged hydrogen end of a molecule and the negatively-charged oxygen end of another molecule is called

   (a) Hydrogen bond

   (b) Covalent bond

   (c) Ionic bond

   (d) Metallic bond

76. The capacity of a material to absorb energy when it is deformed elastically and then, upon unloading, to have this energy recovered is called

   (a) Toughness

   (b) Resilience

   (c) Modulus of elasticity

   (d) Yielding

77. A specimen of steel having an original diameter of 12·8 mm is tensile tested to fracture and found to have engineering fracture strength σ_f of 460 MPa. If its cross sectional diameter at fracture is 10·7 mm, the ductility in terms of percent reduction in area will be

   (a) 25%

   (b) 30%

   (c) 35%

   (d) 40%

78. External companies are enabled to view some of a particular company's information and such sharing of information is known as

   (a) Ethernet

   (b) Internet

   (c) Extranet

   (d) Fibrenet

15   A – ASNP-O-GSEA

79. A system or group of systems that enforces an access control policy between a trusted network and an untrusted network is called

(a) Perimeter access control

(b) Intrusion monitoring

(c) Interfacing the hardware components

(d) Managing the network privately

80. Which one of the following is the correct sequence of e-Governance evolution model ?

(a) Information, Transaction, Transformation and Interaction

(b) Information, Transaction, Interaction and Transformation

(c) Information, Transformation, Transaction and Interaction

(d) Information, Interaction, Transaction and Transformation

81. Which one of the following attack methods is originally developed as a rapid method to conduct many different *IP*-based *DoS* attacks ?

(a) Nestea

(b) Packet storms

(c) Teardrop

(d) Targa

82. A special server-side programs that acts between the Hyper Text Transfer Protocol *HTTP* server and other local resources such as databases is

(a) HTML programs

(b) JavaScript programs

(c) Gateway programs

(d) High Level programs

83. Which of the following log files records failed logins in *UNIX* Operating System ?

(a) Aculog

(b) Xferlog

(c) Loginlog

(d) Syslog

84. What is the time to perform search, insert, and delete operations in the average case as well as the worst case by using AVL tree ?

(a) $O(n)$

(b) $O(\log n)$

(c) $O(n^2)$

(d) $O(n \log n)$

85. Which one of the following digital investigation models is based on the 'Zachman Framework' and was created to assist with the design, development and management of enterprise IT architecture ?

(a) Physical model

(b) Staircase model

(c) FORZA model

(d) Sub-phase model

86. An equivocal forensic analysis is one in which the conclusions regarding the physical and digital evidence are

(a) End of interpretation

(b) Still open to interpretation

(c) Reconstruction of interpretation

(d) Reformation of interpretation

87. Cross-site scripting is a general set of techniques whereby an attacker is able to

(a) Send the mass e-mails to the recipients

(b) Host a website on an infected or malicious web server

(c) Execute a malicious code on another system through an intermediary web application

(d) Control on the web application through SQL control characters

88. An idea, a design, a manuscript, an invention, or a concept which will give rise to a useful product/application, is known as

(a) Intellectual property right

(b) Employees right

(c) Professional right

(d) Recognition right

89. An engineering ethics is the study of

(a) Decisions, policies and values that are morally desirable in engineering practice and research

(b) Policies, time-management and values that are morally desirable in engineering practice and research

(c) Decisions, time-management and values that are morally desirable in engineering practice and research

(d) Policies, human resource management and values that are morally desirable in engineering practice and research

90. Manufacturing, selling or transporting products (liquor and narcotics) that are prohibited by law, is called

(a) Industrial espionage

(b) White-collared crimes

(c) Bootlegging

(d) Glitching

91. Moral statements are merely used to express emotions and to try to influence other people's behaviour but they are not supportable by valid moral reasons. This is termed as

(a) Nihilism

(b) Compatibilism

(c) Emotivism

(d) Eudaimonia

92. In order to ensure the confluence of good engineering, good business, and good ethics, it is essential for engineering and corporations, in their major dimensions, to be

(a) Socially aligned

(b) Spiritually aligned

(c) Morally aligned

(d) Conscientiously aligned

93. What is Teleological Approach ?

(a) Developing an individual personnel characteristics

(b) We can know what is good only when we have fully understood the context

(c) Judging whether an action is right, fair and honest

(d) Placing posters about ethics throughout the organization

94. Self-respect, family happiness, comfortable life, professional growth and recognition are

(a) Terminal values

(b) Instrumental values

(c) Mainstream values

(d) Human values

95. Yawning, sneezing, relaxing the body by bending backwards, snoring, spitting, such habits are to be avoided in front of others in a gathering. A person who is conscious of above habits is said to have

(a) Ethics

(b) Values

(c) Integrity

(d) Civic sense

96. A balance between good and bad consequences of an action, taking into account the consequences for everyone affected is known as

(a) Virtue ethics

(b) Utilitarianism

(c) Duty ethics

(d) Right ethics

97. Ethics that guides human conduct and sets out certain moral standard is called

(a) Metaethics

(b) Applied ethics

(c) Normative ethics

(d) Legal ethics

Directions :

Each of the next Three (03) items consists of two statements, one labelled as the 'Statement (I)' and the other as 'Statement (II)'. You are to examine these two statements carefully and select the answers to these items using the codes given below :

Codes :

(a) **Both Statement (I) and Statement (II) are individually true and Statement (II) is the correct explanation of Statement (I)**

(b) **Both Statement (I) and Statement (II) are individually true but Statement (II) is *NOT* the correct explanation of Statement (I)**

(c) **Statement (I) is true but Statement (II) is false**

(d) **Statement (I) is false but Statement (II) is true**

98. Statement (I) : Explicit indicator is the methodology that should suggest specific and measurable indicators to be used to qualify impacts on the relevant environmental parameters.

Statement (II) : Magnitude is the methodology that should provide for the measurement of impact magnitude.

99. Statement (I) : A country which doubles its capital in ten years will have a higher output per unit of capital than a country which doubles it in twenty years.

Statement (II) : New investment and new technology go together.

100. Statement (I) : An evaluation and identification of sources, types and qualities of pollutants generated by different phases of project activity.

Statement (II) : In activity step model for environmental impact assessment studies, the detailed evaluation of existing ambient air quality, meteorological conditions and nuclear air quality existing in the project area.

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