



# Vyapam

Mechanical Engineering

Mega Mock Challenge

(June 5th - June 6th 2022)

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Questions &  
Answer Key

1. Which one of the following began with the Dandi March?
- A. Home rule Movement  
B. Non-Cooperation Movement  
C. Civil disobedience Movement  
D. Quit India Movement

Ans. C

2. In a Brayton cycle, the value of optimum pressure ratio for maximum net work done between temperatures  $T_1$  and  $T_3$ , where  $T_3$  is the maximum temperature and  $T_1$  is the minimum temperature is

A.  $r_p = \left(\frac{T_3}{T_1}\right)^{\frac{\gamma}{\gamma-1}}$

B.  $r_p = \left(\frac{T_3}{T_1}\right)^{\frac{\gamma-1}{2\gamma}}$

C.  $(r_p)_{opt} = \left(\frac{T_3}{T_1}\right)^{\gamma/2(\gamma-1)}$

D.  $r_p = \left(\frac{T_3}{T_1}\right)^{\frac{2(\gamma-1)}{\gamma}}$

Ans. C

3. If the arrivals at a service facility are distributed as per the Poisson distribution with a mean rate of 10 per hour and the services are exponentially distributed with a mean service time of 4 minutes, what is the probability that a customer may have to wait to be served?
- A. 0.40  
B. 0.50  
C. 0.67  
D. 1.00

Ans. C

4. Select the most appropriate option to fill in the blank.

We have no right \_\_\_\_\_ to the sun.

- A. to stake a claim  
B. to demand a claim  
C. to make a claim  
D. claimed

Ans. A

5. Choose the most appropriate option to change the voice (active/passive) form of the given sentence.

Tiny houses dot the landscape.

- A. The landscape was dotted by tiny houses  
B. The landscape is dot by tiny houses  
C. The landscape is dotted with tiny houses  
D. The landscape has been dotted by tiny houses

Ans. C

6. Two pipes A and B can fill a tank in 36 min and 45 min respectively. A waste pipe C can empty the tank in 30 min. If all the pipes are opened together then the tank will be full in how much time?

- A. 60 min
- B. 90 min
- C. 115 min
- D. None of these

Ans. A

7. In which of the following Milling operation cutter rotated against the direction of travel of work piece.

- A. Up Milling
- B. Down Milling
- C. Face Milling
- D. End Milling

Ans. A

8. Work done is zero for the following process

- A. constant volume
- B. free expansion
- C. throttling
- D. all of the above

Ans. D

9. A refrigeration plant uses a condenser with heat rejection ratio of 1.2. If the capacity of the plant is 210 kJ/min, then the value of the COP of the refrigeration plant is

- A. 3
- B. 5
- C. 7
- D. 9

Ans. B

10. The velocity distribution for flow over a flat plate is given by  $U = (3/4)y - y^2$  in which u is the velocity in m/s at a distance y meter above the plate. If the dynamic viscosity of the fluid is 10 poise, then the shear stress at 0.2 m is

- A.  $0.45 \text{ N/m}^2$
- B.  $0.35 \text{ N/m}^2$
- C.  $0.55 \text{ N/m}^2$
- D.  $0.25 \text{ N/m}^2$

Ans. B

11. A pump running at 1000 rpm consumes 1 kW and generates head of 10 m of water. When it is operated at 2000 rpm, its power consumption and generated head would be

- A. 4 kW, 50 m of water
- B. 6 kW, 20 m of water
- C. 3 kW, 30 m of water
- D. 8 kW, 40 m of water

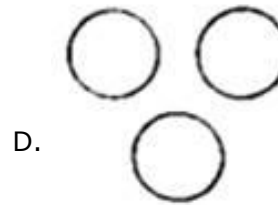
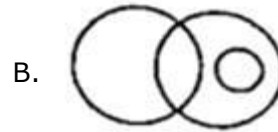
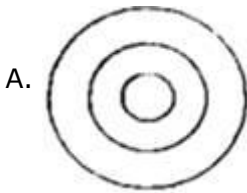
Ans. D

12. Two trains 90 m and 60 m long are running at different speeds. If both trains are running in same direction, they cross each other in 15 seconds while if they run in opposite direction, then cross each other in 10 seconds. Then what will be the ratio between their speeds.

- A. 5:1
- B. 7:5
- C. 2:3
- D. 5:6

Ans. A

13. Identify the diagram that best represents the relationship among the given classes.  
Apple, Golden Apple, Fruits



Ans. A

14. Money transfer through mobile is called \_\_\_\_\_.

- A. IFSC
- B. ATM
- C. IMPS
- D. IFS

Ans. C

15. Find a word that is the synonym of -  
PET

- A. manumit
- B. engorge
- C. cultivate
- D. fondle

Ans. D

16. Which Vitamins are those, if taken in excess can be dangerous as they are stored in the body?

- A. B Complex
- B. E and C
- C. B and C
- D. A and D

Ans. D

17. Given below are some idioms/phrases followed by four alternative meanings to each. Choose the response (A), (B), (C) or (D) which is the most appropriate expression and mark your response in the Answer Sheet accordingly.

Great minds think alike

- A. It is said when two people have the same opinion.
- B. It is said when clever people think rationally.
- C. Since there is only one truth, the great philosophers have reached on similar conclusions.
- D. Scientists and philosophers easily become friends.

Ans. A

18. An image or portion of text on a web page which is linked to another web page is known as\_\_\_\_\_.

- A. Hyper Link
- B. Javascript
- C. Object Code
- D. Patch

Ans. A

19. If fire is called cloud, cloud is called water, water is called air, air is called sea and sea is called river, then what do we drink when thirsty ?

- A. Fire
- B. Air
- C. Sea
- D. River

Ans. B

20. Which type of reproduction occurs in Hydra?

- A. Regeneration
- B. Fission
- C. Budding
- D. Fragmentation

Ans. C

21. A statistical process control chart which shows the number of defects found in a subgroup of fixed size is \_\_\_\_\_.

- A. C-chart
- B. R-chart
- C. Control chart
- D. Gantt chart

Ans. A

22. PERT has following time estimate

- A. one time estimate
- B. two time estimate
- C. three time estimate
- D. nil time estimate

Ans. C

23. Rs 94000 is divided among A, B and C such that 20% of A's share = 25% of B's share = 15% of C's share. What is the share (in Rs) of C?

- A. 23500
- B. 29500
- C. 40000
- D. 42000

Ans. C

24. In a vapour absorption refrigerator, the temperatures of evaporator and ambient air are 10 °C and 30 °C, respectively. For obtaining COP of 2 for this system, the temperature of the generator is to be nearly

- A. 90 °C
- B. 85 °C
- C. 80 °C
- D. 75 °C

Ans. C

25. Consider the following statements for the air-standard efficiency of Diesel cycle:
- 1) For the same compression ratio, the efficiency decreases with increasing cutoff ratios.
  - 2) For the same compression ratio and same heat input, Diesel cycle is more efficient than Otto cycle.
  - 3) For same maximum pressure and constant heat input, Diesel cycle is more efficient than Otto cycle.

Which of the above statements are correct\_\_\_\_\_?

- A. 1, 2 and 3  
B. 1 and 2 only  
C. 1 and 3 only  
D. 2 and 3 only

Ans. C

26. 'संकल्प' शब्द में उपसर्ग बताइए:

- A. सन  
B. सम्  
C. सक  
D. सनक

Ans. B

27. If the efficiency of Carnot engine is 50% .If refrigerator is working between same temperature reservoirs that of Carnot engine, then what is the COP of the refrigerator

- A. 2  
B. 3  
C. 1  
D. 0.5

Ans. C

28. Which shortcut key is used to create a new or blank document?

- A. Ctrl+N  
B. Ctrl+A  
C. Ctrl+O  
D. Ctrl+Y

Ans. A

29. The cycle generally used for gas turbines is:

- A. Otto cycle  
B. Brayton cycle  
C. Carnot cycle  
D. Dual cycle

Ans. B

30. निम्न में से दन्त्य व्यंजन वर्ण कौन-से हैं?

- A. ज, झ  
B. द, ध  
C. फ,भ  
D. ध,म

Ans. B

31. "ऋणमुक्त" शब्द में समास है।

- A. तत्पुरुष  
B. अव्ययीभाव समास  
C. कर्मधारय  
D. द्वंद्व

Ans. A

32. A single cylinder engine running at 1200 rpm develops a torque of 7 N-m. The indicated power of the engine is 1.76 kW. The loss due to friction power in the percentage is
- A. 40%
  - B. 50%
  - C. 60%
  - D. 70%

Ans. B

33. What are bronze medals made up of?
- A. Cu and Zn
  - B. Cu, Sn
  - C. Zn and Ni
  - D. None

Ans. B

34. Which of the following process is used to separate iodine from a mixture of Iodine and Potassium Chloride?
- A. Sedimentation
  - B. Distillation
  - C. Filtration
  - D. Sublimation

Ans. D

35. Which of the given mechanisms is an exact straight line motion mechanism?
- A. Grasshopper mechanism
  - B. Robert's mechanism
  - C. Peaucellier mechanism
  - D. Tchebicheff's mechanism

Ans. C

36. What is the formula to calculate maximum efficiency of a worm gear?
- A.  $(1 + \sin \phi) / (1 - \sin \phi)$
  - B.  $(1 - \sin \phi) / (1 + \sin \phi)$
  - C.  $(\tan(\lambda_1 - \phi)) / \tan \lambda_1$
  - D.  $(\tan(\lambda_1 + \phi)) / \tan \lambda_1$

Ans. B

37. A stream function is given by  $\psi = 2x^2y + (x + 1)y^2$ . The flow rate across a line joining point A(3, 0) & B(0, 2) is \_\_\_\_\_.
- A. 2 unit
  - B. 4 unit
  - C. 6 unit
  - D. 8 unit

Ans. B

38. In a laminar pipe flow, water flows through a pipe of diameter 100 mm, with centreline velocity 20 m/s. Then the velocity of fluid at a distance of 20 mm from the pipe surface is
- A. 16.8 m/s
  - B. 12.8 m/s
  - C. 8.8 m/s
  - D. 8 m/s

Ans. B

39. What happens when supercharging is done for spark ignition engines?
- A. Increase knocking
  - B. Decrease knocking
  - C. No effect
  - D. May increase or decrease.

Ans. A

40. Consider a steady fully, developed flow in a horizontal pipe of diameter  $D$ . Over a section of length  $L$  of the pipe, a pressure drop of  $\Delta p$  is observed. Wall shear stress for the section is

A.  $\frac{\Delta p D}{4L}$

B.  $\frac{\Delta p D}{2L}$

C.  $\frac{\Delta p \pi L}{2D}$

D.  $\frac{\Delta p \pi L}{4D}$

Ans. A

41. A reversible engine operates between temperature  $T_1$  and  $T_2$ . The energy rejected by this engine acts as an input for another reversible engine at temperature  $T_2$ , which rejects to a reservoir at temperature  $T_3$ . What is the relation between  $T_1$ ,  $T_2$  and  $T_3$ , if both the engine is having same efficiency.

A.  $T_2 = \frac{T_1 + T_3}{2}$

B.  $T_2 = \sqrt{T_1^2 + T_3^2}$

C.  $T_2 = \sqrt{T_1 T_3}$

D.  $T_2 = \frac{T_1 - T_3}{2}$

Ans. C

42. In a polytropic expansion process the ratio of final volume to its initial volume is 2 and ratio of final temperature to initial temperature is  $1/2$  then the polytropic index of expansion is

A. 0

B. 1

C. 2

D. 1.3

Ans. C

43. Epiphytes are plants that\_\_\_\_\_.

A. can only grows in shady areas.

B. are found in deserts only.

C. grows on host plants and also nourished by host plant

D. grows on host plant but do not nourished by host plant

Ans. D

44. A shaft is subjected to fluctuating axial load from 50 kN to 150 kN. Ultimate, strength, yield strength & endurance strength are 400 MPa, 300 MPa and 200 MPa respectively. What will be the cross-sectional area of the shaft, if factor of safety is 2. (Use Goodman criteria)

A. 500 mm<sup>2</sup>B. 750 mm<sup>2</sup>C. 1000 mm<sup>2</sup>D. 1500 mm<sup>2</sup>

Ans. C



45. Article 243-ZC exempts the application of Municipality Provisions in which states?
- A. Assam, Meghalaya, Tripura and Mizoram
  - B. Assam, Manipur, Tripura and Arunachal Pradesh
  - C. Sikkim, Assam, Tripura and Mizoram
  - D. Assam, Meghalaya, Jharkhand and Chattishgarh

Ans. A

46. Select the incorrectly spelt word.
- A. machenic
  - B. medieval
  - C. magazine
  - D. measure

Ans. A

47. Banana is a type of \_\_\_\_\_.
- A. Drupe Fleshy fruit
  - B. Berry Fleshy fruit
  - C. Pome Fleshy fruit
  - D. Aggregate fruit

Ans. B

48. In an alloy, copper is 85% and tin is 12%. In another alloy 80% is copper and remaining is tin. In what ratio should the two alloy be mixed so that the new mixture has  $82\frac{2}{7}$  % copper. Also find the percentage of tin in the new mixture.
- A. 16 : 19, 15  $\frac{23}{35}$ %
  - B. 19 : 16, 16  $\frac{12}{35}$ %
  - C. 16 : 19, 16  $\frac{12}{35}$ %
  - D. 19 : 16, 15  $\frac{23}{35}$ %

Ans. C

49. Given below are four jumbled sentences. Pick the option that gives their correct order.
- P. It created artificial grasslands of cereal crops, pastures, and other areas.
  - Q. Grasslands are one of the most widespread of all the major vegetation types of the world.
  - R. This is so, however, only because human manipulation of the land has significantly altered the natural vegetation.
  - S. Now these areas require some form of repetitious, unnatural disturbance such as cultivation, heavy grazing, burning, or mowing to persist.
- A. QPRS
  - B. PQRS
  - C. QRPS
  - D. PQSR

Ans. C

50. **Direction:** Given below are four jumbled sentences. Pick the option that gives their correct order.  
P: Along with that, characteristics such as a delay before visiting a health care facility can also be helpful for physicians.  
Q: Between 88 per cent and 94 per cent victims of intimate partner violence or abuse by a spouse seek medical attention for injuries to the head and neck, and 56 per cent of those have facial fractures.  
R: The patterns of facial injury in women who are victims of intimate partner violence are different than that of females who experience facial trauma from other causes.  
S: The above revelation could help surgeons and other physicians in recognizing patients who are victims of such type of abuse.

- A. QPRS  
B. SQPR  
C. SPQR  
D. RSPQ

Ans. D

51. An object has a potential energy of 600 J with a mass of 20kg and gravity of 10N/ kg. The height of the object is\_\_\_\_\_?

- A. 1m  
B. 2m  
C. 3m  
D. 4m

Ans. C

52. In case of a Partnership Firm, a \_\_\_\_\_ is prepared to show the distribution of profits among different partners.

- A. Profit & Loss A/c  
B. Partner's Capital A/c  
C. Drawings A/c  
D. Profit & Loss Appropriation A/c

Ans. D

53. 'तद्धित' का सन्धि-विच्छेद क्या है?

- A. तत् + हित  
B. तद + हित  
C. तत + धित  
D. तद् + धित

Ans. A

54. In the following question, select the related group of letters from the given alternatives.

BFR : DLJ :: CIA : ?

- A. JNQ  
B. EOS  
C. FOR  
D. ENS

Ans. B

55. The ratio of volumetric strain in a thin cylinder to that in a thin spherical shell of same diameter and subjected to same internal pressure. Also the shells have same thickness and are made up of same material.

A.  $\frac{5 - 4\mu}{2 - \mu}$

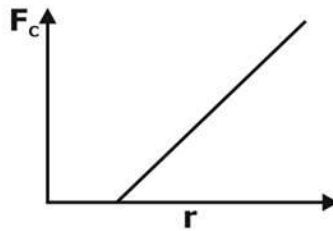
B.  $\frac{5 - 4\mu}{3 - 3\mu}$

C.  $\frac{5 - 4\mu}{1 - \mu}$

D.  $\frac{5 - 4\mu}{1 - 3\mu}$

Ans. B

56. A controlling diagram for a spring controlled governor is shown. This governor is a \_\_\_\_\_.



A. Stable governor.

B. Unstable governor.

C. Isochronous governor.

D. Nothing can be said.

Ans. A

57. 'SWAYATT' is an initiative by which ministry?

A. Ministry of Commerce and Industry

B. Ministry of Rural Development

C. Ministry of Finance

D. Ministry of Information Technology

Ans. A

58. 'जामाता' शब्द का पर्यायवाची शब्द है-

A. चाचा

B. बड़ा भाई

C. दामाद

D. सभी

Ans. C

59. In the question below is given a statement followed by some courses of actions. You have to assume everything in the statement to be true and on the basis of the information given in the statement. Decide which of the suggested courses of action logically follow(s) for pursuing.

**Statement:** "India's first quarter GDP contracted by a massive 23.9%".

**Course of action:**

I. Government should adopt easy money policy.

II. Government can push for creation of demand in the economy.

A. If only I is logical course of action.

B. If only II is logical course of action.

C. If neither I nor II is logical course of action.

D. If both I and II are logical course of action.

Ans. D

60. मुहावरे का नाम बताओ -

तुमने अभी केवल साक्षात्कार दिया है ,नौकरी मिली भी नहीं और \_\_\_\_\_

- A. दिमाग आसमान पर चढ़ गया  
B. अंगूठा दिखाना  
C. अपना उल्लू सीधा करना  
D. तिल का ताल करना

Ans. A

61. Select the word which means the same as the group of words given.

Condition of sleep during certain parts of the year

- A. Constipation  
B. Somnambulism  
C. Dehydration  
D. Hibernation

Ans. D

62. Which cells in the eye are responsible for scotopic vision?

- A. Cone cells  
B. Rod cells  
C. Both A & B  
D. None of the above

Ans. B

63. Choose the order for atomic packing factor.

where

DC: Diamond cubic structure

SCC: Simple cubic crystal structure

BCC: Body centered cubic structure

FCC: Face centered cubic structure

- A.  $(APF)_{DC} > (APF)_{SCC} > (APF)_{FCC} > (APF)_{BCC}$   
B.  $(APF)_{DC} < (APF)_{SCC} < (APF)_{BCC} < (APF)_{FCC}$   
C.  $(APF)_{SCC} < (APF)_{FCC} < (APF)_{DC} < (APF)_{BCC}$   
D.  $(APF)_{FCC} < (APF)_{DC} < (APF)_{SCC} < (APF)_{BCC}$

Ans. B

64. Seals found at the Indus Valley Civilization are made from

- A. Steatite  
B. Limestone  
C. Copper  
D. Bronze

Ans. A

65. A wire of  $1\Omega$  has a length of 1 m. It is stretched till its length increases by 25%. The percentage change in resistance to the nearest integer is:

- A. 25%  
B. 12.5%  
C. 76%  
D. 56%

Ans. D

66. For the FCC structure, the atomic packing factor is:

- A. 0.74  
B. 0.68  
C. 0.34  
D. None of the above

Ans. A

67. Which of the key can be used on tapered shaft \_\_\_\_\_?  
A. Sunk key  
B. Wood ruff key  
C. Feather key  
D. Saddle key

Ans. C

68. Match the following:  
P. Static friction  
Q. Brittle materials  
R. Metal-metal contact  
S. Haigh’s theory  
1) Maximum strain energy theory  
2) Low in Hydrostatic lubrication  
3) MPST (Maximum principal stress theory)  
4) Low in Hydrodynamic lubrication  
5) Thin film lubrication  
A. P-5, Q-1, R-3, S-5  
C. P-2, Q-3, R-5, S-1

B. P-2, Q-1, R-3, S-5  
D. P-4, Q-3, R-5, S-1

Ans. D

69. The nominal life of a Ball bearing is 4500hrs when operating at 1500 rpm and subjected to a load of 12000 N, the expected life will be 300 days if load is 8000 N and operating at a speed of \_\_\_\_\_.  
A. 7560 rpm  
C. 2275 rpm  
B. 2400 rpm  
D. 3165 rpm

Ans. D

70. The average weight of A, B and C is 71 kg. If the average weight of A and B is 69.5 kg, and the average weight of A and C is 73.5 kg, then the weight of A (in kg) is:  
A. 71  
C. 73  
B. 69  
D. 74

Ans. C

71. Which year in future and in past will have same calendar as 2021?  
A. 2026 and 2014  
C. 2026 and 2015  
B. 2027 and 2014  
D. 2027 and 2015

Ans. D

72. Which is not the unit of frequency?  
A. kHz  
C. sec<sup>-1</sup>  
B. cps  
D. sec

Ans. D

73. In which district of Madhya Pradesh India's first organic farming unit has been established?

- A. Raisen district
- B. Sheopur district
- C. Guna district
- D. Indore district

Ans. D

74. Which of the following statement is NOT true about Mukhyamantri Arthik Kalyan Yojana?

- A. The state government has also stated that under this scheme the state government has announced to offer with 50 percent of the project cost to selected women beneficiaries.
- B. Mukhyamantri Arthik Kalyan Yojana is mainly focused on offering with financial help to the beneficiaries who come from the Tribal class of the society.
- C. Apart from this the priority of the same will also be given to the Disabled people who belong to the backward class of the society.
- D. For this the overall project cost limitation set by the state government is equivalent to Rs 15,000 per project in value that will be given by the state government at the time of implementation.

Ans. B

75. The Chief Minister Women Empowerment Scheme has been started from

- A. August 2012
- B. September 2013
- C. October 2014
- D. November 2015

Ans. B

76. Barugaza was the Greek name of which city?

- A. Bareilly
- B. Bharuch
- C. Baramati
- D. Bhubaneswar

Ans. B

77. Nagarhole National Park, also known as Rajiv Gandhi National Park, is a wildlife reserve in the state of \_\_\_\_\_.

- A. Gujarat
- B. Madhya Pradesh
- C. Rajasthan
- D. Karnataka

Ans. D

78. Desert, rain forests, coral reefs and mangroves are features of \_\_\_\_\_ diversity.

- A. Genetic
- B. Cultural
- C. Species
- D. Ecological

Ans. D

79. Match the List I and List II :

List I	List II
A. Binder	1. Reduce cost, shrinkage
B. Filler	2. Make the molding of plastic easier
C. Plasticizer	3. Cellulose derivatives
D. Lubricant	4. Accelerate and condensation and polymerization
	5. Toughness and resistance to temperatures

A. A-3 B-1 C-2 D-5

B. A-3 B-1 C-5 D-2

C. A-5 B-3 C-1 D-4

D. A-3 B-2 C-1 D-4

Ans. B

80. A molten drop of liquid metal, spherical in shape with 6 mm diameter solidify in 8 seconds. What is the solidification time of same molten drop if its radius is doubled?

A. 20s

B. 16s

C. 32s

D. 8s

Ans. C

81. Minimum and maximum diameter of work piece is 180 mm and 540 mm respectively. Maximum and minimum cutting velocities are 240 m/min and 30 m/min respectively. The speed ratio for the given configuration of machining is

A. 3

B. 8

C. 8/3

D. 24

Ans. D

82. A standard specimen of diameter and height equal to 2 inches and it takes 3 min to pass 1800 cm<sup>3</sup> of air at a pressure of 60 kg/m<sup>2</sup>. The permeability number of sand is

A. 25

B. 50

C. 40

D. 60

Ans. A

83. The splitting up of workpiece in the rolling, where one part moves with upper roll and other along lower roll is called.

A. Laminations

B. Zipper cracks

C. Cold shut

D. Alligatoring

Ans. D

84. Which of the following locator is used if the variation between the center of two holes are present?

A. Round locators

B. Diamond locators

C. Vie block

D. Mandrel

Ans. B

85. The wavelength of light used in optical flat for height inspection is  $1 \mu\text{m}$ . Number of fringes produced on the gauge width of 10 mm is 5. The distance between the block is 40 mm. The difference in height of standard and slip gauge is

- A.  $2.5 \mu\text{m}$
- B.  $5 \mu\text{m}$
- C.  $10 \mu\text{m}$
- D. None of these

Ans. C

86. Collapsible tubes are made by which process?

- A. Forward cold extrusion
- B. Impact extrusion
- C. Cold extrusion
- D. Hydrostatic extrusion

Ans. B

87. In an EDM circuit, resistance has a value of  $100 \Omega$ , coupled with the capacitance of  $30 \mu\text{F}$ . Supply voltage is 440 V and discharge voltage is 220 V. The charging time (in milliseconds) is

- A. 0.55
- B. 1.33
- C. 2.08
- D. 3

Ans. C

88. The number of instantaneous centres of rotation in a quick return motion mechanism are

- A. six
- B. eight
- C. twelve
- D. fifteen

Ans. A

89. The tension in the cable supporting a lift is more when the lift is

- A. moving downwards with uniform velocity
- B. moving upwards with uniform velocity
- C. moving upwards with acceleration
- D. moving downwards with acceleration

Ans. C

90. The ratio of magnitude of linear momentum for two objects having mass 30 kg and 10 kg respectively with equal kinetic energy is

- A.  $\sqrt{\frac{1}{3}}$
- B.  $(3)^2$
- C.  $\sqrt{3}$
- D.  $\left(\frac{1}{\sqrt{3}}\right)^2$

Ans. C

91. Consider the following statements:

- 1). Parallel flow heat exchanger is more effective than the counter flow heat exchanger
- 2). Parallel flow type heat exchanger is used for 4-wheeler radiator.

Which of the following statements is/are correct ?

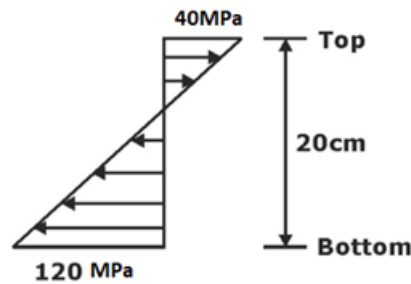
- A. 1 only
- B. 2 only
- C. Both 1 & 2
- D. Neither 1 nor 2

Ans. D





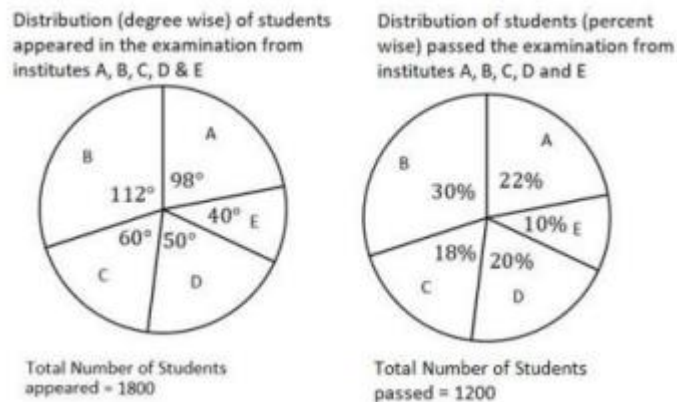
99. Bending stress variation for a cross-section of a beam is as shown. The location of neutral axis from top fibre is



- A. 5 cm
- B. 16 cm
- C. 15 cm
- D. 10 cm

Ans. A

100. Study the given pie charts and answer the question that follows.



The number of students who passed from institute C exceeds the number of students who appeared from institute E is x. The value of x lies between:

- A. 18 and 22
- B. 14 and 18
- C. 10 and 14
- D. 22 and 26

Ans. B

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