



SSC JE

Civil Engineering

Mega Mock Test - 1

(June 29th - June 30th 2022)

Questions &
Answer Key

1. In the following question, select the word which cannot be formed using the letters of the given word.

COMMUNICATION

- A. UNION
- B. ACTION
- C. MUSIC
- D. CAUTION

Ans. C

2. Samira is taller than Sanjay, but shorter than Sushil. Sunil is as tall as Samira, but shorter than Sandeep, who is not as tall as Sushil. Who is the tallest?

- A. Sanjay
- B. Sushil
- C. Sandeep
- D. Samira

Ans. B

3. Choose the word which cannot be formed from the letters of the given word 'CHRISTMAS'

- A. CHRIST
- B. SMART
- C. CRUST
- D. HARM

Ans. C

4. Common **Directions:** In each of the following questions, select the one which is different, from other three responses. End

Select the one which is different, from other three responses.

- A. Detach
- B. Affix
- C. Append
- D. Fasten

Ans. A

5. Which one of the following diagrams represents Insects, Flies and Dogs?



Ans. B

6. A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.

BEAG, DGCI, FIEK, ?

- A. HGKJ
- B. HKLJ
- C. HKGM
- D. HMIE

Ans. C

7. In plane table, the operation which must be carried out is

- A. Resection
- B. orientation
- C. radiation
- D. intersection

Ans. B

8. Which of the following method is used for speed and delay study?
 A. Tag on car method B. Floating car method
 C. Return post card method D. All of the above

Ans. B

9. Intersection method of detailed plotting is most suitable for
 A. Buildings B. urban areas
 C. hilly areas D. plains

Ans. C

10. In PERT analysis, the time estimates of activities follow
 A. normal distribution curve B. β -distribution curve
 C. Poisson's distribution curve D. binomial distribution curve

Ans. B

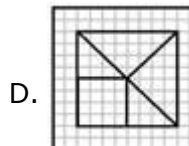
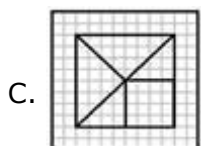
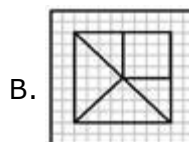
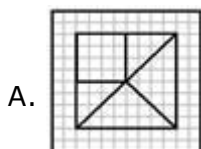
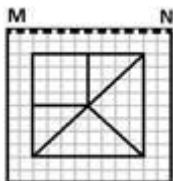
11. **Directions: For each of the following questions there is some relationship between terms to the left of :: and the same exists between the two terms to its right in each these questions the fourth term is missing term is one of the alternatives among the five term given below. Find out this term.**

PCWL: REXM :: THNY:

- A. OZPL B. KOVZ
 C. PMKZ D. VJOZ

Ans. D

12. If a mirror is placed on the line MN, then which of the answer figures is the right image of the given figure?



Ans. D

13. In which year, the Keoladeo National Park was declared as a World Heritage Site?
 A. 1985 B. 1980
 C. 1990 D. 1928

Ans. A

14. The Battle of Wagram was between which of the following countries?
 A. France-America B. Russia- America
 C. France- Austria D. None of the above

Ans. C

15. The name of 'New Delhi' was given in which of the following year?

- A. 1930
- B. 1947
- C. 1927
- D. 1998

Ans. C

16. The practice of selling goods in a foreign country at a price below their domestic selling price is called

- A. Diplomacy
- B. Discrimination
- C. Dumping
- D. Double pricing

Ans. C

17. When two goods are perfect complementary, the indifference curve is

- A. A straight line
- B. U-shaped
- C. L-shaped
- D. circular in shape

Ans. C

18. Finance commission is organised

- A. Every year
- B. After every four year
- C. After every two year
- D. After every five year

Ans. D

19. Economic rent refers to:

- A. Payment made for the use of labour
- B. Payment made for the use of capital
- C. Payment made for the use of organisation
- D. Payment made for the use of land

Ans. D

20. What is Kitchen cabinet?

- A. Council of ministers including President
- B. Small body of important ministers, prime minister and some important outsiders
- C. Legislative council of a state and heads of Panchayats
- D. Ministers from the legislative assemblies of state and union council of ministers including prime minister.

Ans. B

21. Which of the following statements is not correct:

- A. The Average fixed cost curve is never U Shaped.
- B. The firm will attain equilibrium at the point where marginal cost curve cuts marginal revenue from below.
- C. The firm will attain normal profit when Average revenue is equal to marginal cost.
- D. The firm is used to its full capacity without any wastage of resources when marginal cost is equal to average cost.

Ans. C

Ans. C

27. For a continuous floor slab supported on beams, the ratio of end span length and intermediate span length is _____.
- A. 0.6
B. 0.7
C. 0.8
D. 0.9

Ans. D

28. The reduction coefficient of a reinforced concrete column with an effective length of 4.8 m and size $250 \times 300 \text{ mm}^2$ is _____.
- A. 0.8
B. 0.85
C. 0.9
D. 0.95

Ans. B

29. The atmospheric pressure with rise in altitude decreases _____.
- A. linearly
B. first slowly then steeply
C. first steeply and then gradually
D. unpredictable

Ans. B

30. Water content of a soil sample is the difference of the weight of the given sample at the given temperature and the weight determined after drying it for 24 hours at temperatures ranging from _____.
- A. 80° to 90° C
B. 90° to 95° C
C. 95° to 100° C
D. 105° to 110° C

Ans. D

31. The appropriate percentage of water in sewage is
- A. 90%
B. 99%
C. 99.90%
D. 99.99%

Ans. C

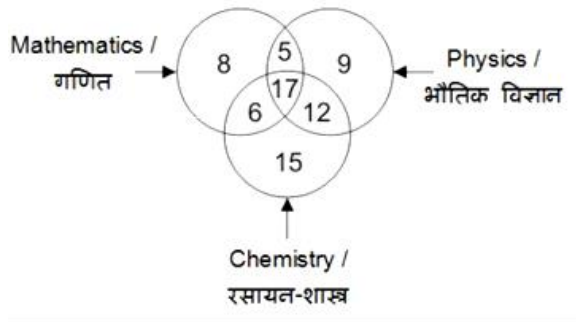
32. Which of the following is a dummy activity?
- A. Excavate the foundations
B. Waiting for the arrival of concrete materials
C. Lay the foundation concrete
D. Cure the foundation concrete

Ans. B

33. To process of mixing clay, water and other ingredients to make bricks is known as
- A. Tempering
B. Kneading
C. Pugging
D. Moulding

Ans. B

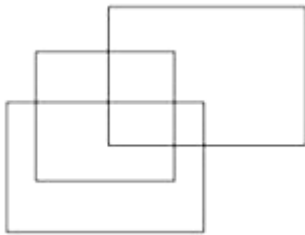
34. In the given figure, how many people study only 2 subjects?



- A. 11
- B. 23
- C. 12
- D. 40

Ans. B

35. How many rectangles or squares are there in the given figure?



- A. 9
- B. 10
- C. 11
- D. 12

Ans. C

36. Estimate for electrical wiring is prepared on the basis of?

- A. Number of appliances
- B. Voltage
- C. Power
- D. Number of points

Ans. D

37. A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.

31, 32, 36, 45, 61, ?

- A. 86
- B. 89
- C. 84
- D. 83

Ans. A

38. The uppermost layer over the earth is called the _____.

- A. Mantle
- B. Core
- C. Crust
- D. Exosphere

Ans. C

39. There are 45 trees in a row. The lemon tree is 20th from right end. What is the rank of lemon tree from left end?

- A. 26
- B. 24
- C. 25
- D. 27

Ans. A

40. How does La-Nina affect the Pacific Ocean?
- A. Decreases salinity of ocean
 - B. Cools down the temperature of water
 - C. Maintains stable temperature of water
 - D. Increases salinity of ocean

Ans. B

41. Medium term loans are provided for a period of _____
- A. 1 year to 2 years
 - B. 15 months to 3 years
 - C. 15 months to 4 years
 - D. 1 year to 3 years

Ans. D

42. Match the following.

| | |
|-------------------------------|----------------|
| Social Reform Movement | Founder |
|-------------------------------|----------------|

- | | |
|-----------------|---|
| 1. Arya Samaj | a. Raja Ram Mohan Roy |
| 2. Brahmo Samaj | b. Dayanand Saraswati |
| 3. Veda Samaj | c. Atmaram Pandurang |
| 4. PrathnaSamaj | d. Keshab Chandra Sen and K. Sridharalu |

- | | |
|--------------------------|--------------------------|
| A. 1-b , 2 -a, 3-c , 4-d | B. 1-b , 2-a , 3-d , 4-c |
| C. 1-a , 2-b , 3-d , 4-c | D. 1-b , 2-d , 3-a , 4-c |

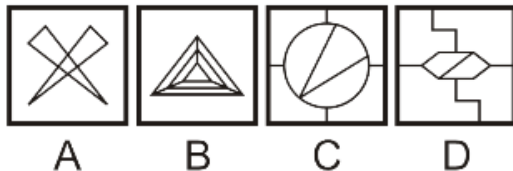
Ans. B

43. From the given answer figures, select the one in which the question figure is hidden/embedded.

Question figure:



Answer figures:



- | | |
|------|------|
| A. A | B. B |
| C. C | D. D |

Ans. B

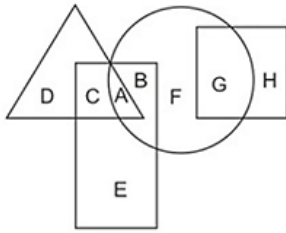
44. **Select the missing number from the given responses**

| | | |
|-----|-----|-----|
| 111 | 314 | 205 |
| 34 | 39 | 102 |
| ? | 275 | 103 |

- | | |
|--------|--------|
| A. 172 | B. 75 |
| C. 77 | D. 170 |

Ans. C

45. In the following figure, square represents Therapists, triangle represents Geneticists, circle represents yoga practitioners and rectangle represents Fathers. Which set of letters represents yoga practitioners who are neither genetics nor fathers?



- A. C, B
B. E, A
C. G, C
D. F, G

Ans. D

46. Arrange the following words as per order in the dictionary.

- 1) Launch
- 2) Laugh
- 3) Lattice
- 4) Latent
- 5) Latitude

- A. 4, 5, 3, 2, 1
B. 4, 3, 5, 1, 2
C. 4, 5, 1, 2, 3
D. 4, 5, 1, 3, 2

Ans. A

47. Which of the following are the losses in prestress in pretensioned system?

- A. Friction
B. Anchorage slip
C. Elastic shortening
D. Friction and anchorage slip

Ans. C

48. If the capillary rise of water in a 1 mm diameter tube is 3 cm, the height of capillary rise of water in a 0.2 mm diameter tube in centimeter will be

- A. 1.5
B. 7.5
C. 15
D. 75

Ans. C

49. The value of the property (without being dismantled) at the end of the useful life period is known as _____.

- A. Scrap value
B. Salvation value
C. Junk value
D. Book value

Ans. B

50. Hampi is also known by which name ?

- A. Karnataka
B. Kishkindha
C. Surat
D. Both (A) and (B)

Ans. B

51. If X, Y and Z are fineness moduli of coarse fine and combined aggregates, the percentage (P) of fine aggregates to combined aggregates is

1) $P = \frac{z-x}{z-y} \times 100$

2) $P = \frac{x-z}{z-y} \times 100$

3) $P = \frac{x-z}{z+y} \times 100$

4) $P = \frac{x+z}{z-y} \times 100$

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

Ans. B

52. Find the missing number in the series.

2, 3, 8, ?, 112, 565

- A. 565
- B. 112
- C. 27
- D. 8

Ans. C

53. What was the real name of Nurjahan ?

- A. Harkhabai
- B. Jagat Gosai
- C. Mariam-uz-Zamani
- D. Mehr-un-Nisaa

Ans. D

54. The least count of a theodolite is ____.

- A. 1 degree
- B. 2 minutes
- C. 2 seconds
- D. 20 seconds

Ans. D

55. Who abolished the dual system of administration ?

- A. Lord Wellesley
- B. Warren Hastings
- C. Lord Cornwallis
- D. Sir John Shore
- E. None of the above/More than one of the above

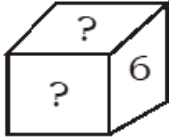
Ans. B

56. As a quality measurement parameter cetane number is mainly used for measuring the quality of

- A. Kerosene
- B. Petrol
- C. Diesel
- D. Terpene

Ans. C

57. In the given dice which numbers will come in place of Questions marks.



- A. 1 and 4
- B. 3 and 4
- C. 2 and 3
- D. 5 and 2

Ans. C

58. From a same point K, Indu and Saumya walked in opposite directions. After walking 5km, Indu turned right and walked 3km, again she turned right and walked 5km. From the starting point Saumya walked 4km and turned left.

At this point, if Indu was facing East, then which direction would be Saumya facing?

- A. North
- B. South
- C. East
- D. North-West

Ans. A

59. The field test for the quality of cement consists in putting a small quantity of cement in a bucket containing water. A good quality cement will:

- A. immediately dissolve in the water
- B. float on the water surface
- C. immediately sink to the bottom of the bucket
- D. produce the steam

Ans. B

60. In the composition of good bricks, the total content of silt and clay, by weight, should not be less than:-

- A. 20%
- B. 30%
- C. 50%
- D. 75%

Ans. C

61. Calculate the quantity of the sand required (in cubic meter) in 20 cubic meters of reinforced cement concrete (1 : 2 : 4).

- A. 2.87
- B. 4.4
- C. 5.7
- D. 8.8

Ans. D

62. Concrete containing

- A. silicious aggregates, has higher co-efficient of expansion
- B. igneous aggregates, has intermediate co-efficient of expansion
- C. lime stones has lowest co-efficient of expansion
- D. All option are correct

Ans. D

63. In ordinary cement, about 99% of its final strength (Characteristic Strength) is achieved in _____.

- A. 3 days
- B. 7 days
- C. 28 days
- D. 1 year

Ans. C

64. What is the capital of Kenya?

- A. Niamey
- B. Bamako
- C. Nairobi
- D. Tripoli

Ans. C

65. Which act gave India, the monopoly to print its own currency?

- A. Paper Currency Act of 1861
- B. Reserve Bank of India Act, 1934
- C. Banking Regulation Act, 1949
- D. Indian Coinage Act, 2011

Ans. A

66. Which of the following state is known as the "Tea Garden"?

- A. Sikkim
- B. Mizoram
- C. West Bengal
- D. Assam

Ans. D

67. In an irrigated field, the net irrigation requirement is 15 cm, the application efficiency is 80% and water conveyance efficiency is 60%. What is the gross irrigation requirement (in cm)?

- A. 11.25
- B. 18.75
- C. 25
- D. 31.25

Ans. D

68. In the falling head permeability test, in the duration of 3 hours the initial head of 1000 mm is dropped to 350 mm. The diameter of the stand pipe is 0.5cm. The length and diameter of the soil specimen are 20 cm and 10 cm respectively. What is the coefficient of permeability (mm/s) of the soil?

- A. 4.86×10^{-3}
- B. 4.86×10^{-5}
- C. 5.23×10^{-3}
- D. 5.2×10^{-5}

Ans. B

69. Calculate the primary estimate including contractor's profit in rupees for the building having a plinth area of 1,500 square meters and a rate of Rs.2,000 per square meter.

- A. 30,00,000
- B. 31,50,000
- C. 33,00,000
- D. 35,00,000

Ans. C

70. Eddy's theorem in arches is applicable to

- A. Inclined loading
- B. Vertical loading
- C. Horizontal loading
- D. Both inclined and horizontal loading

Ans. B

71. The Vernier scale in which 10 divisions of the vernier is equal to 9 divisions of the main scale is called _____

- A. direct Vernier
- B. double Vernier
- C. extended Vernier
- D. retrograde Vernier

Ans. A

72. India's first university for the transgender community will be opened in which state of India?

- A. Uttar Pradesh
- B. Madhya Pradesh
- C. Kerala
- D. Goa

Ans. A

73. Field irrigation requirement (FIR) is

- A. $\frac{\text{Consumptive irrigation requirement}}{\text{Water application efficiency}}$
- B. $\frac{\text{Consumptive irrigation requirement}}{\text{Water conveyance efficiency}}$
- C. $\frac{\text{Net irrigation requirement}}{\text{Water application efficiency}}$
- D. $\frac{\text{Net irrigation requirement}}{\text{Water conveyance efficiency}}$

Ans. C

74. The soil moisture tension of a soil at permanent wilting point ranges from

- A. 3 – 10 atmospheres.
- B. 7 – 32 atmospheres.
- C. 1/10 – 1/3 atmospheres.
- D. 1/32 – 1/7 atmospheres.

Ans. B

75. A linear reservoir is one in which

- A. The storage varies linearly with the outflow rate.
- B. The volume varies linearly with elevation.
- C. The storage varies linearly with time.
- D. The storage varies linearly with the inflow rate.

Ans. A

76. If the damping ratio is given by 0.10 and damping coefficient is 225 kN-s/m. What is the value of critical damping ratio (kN-s/m)?

- A. 22.5
- B. 225
- C. 2250
- D. 2500

Ans. C

77. **Select the number group in the options which is similar to the given number-group.**

(52, 49, 169)

- A. (41, 25, 49)
- B. (18, 52, 169)
- C. (59, 80, 98)
- D. (43, 49, 225)

Ans. A

78. An extended aeration tank receives a BOD load of 768 kg/day. If two aerators with oxygen transfer capacity of 0.8 kg of O₂/HP hour are to be installed in aeration tank, what is the capacity of each aerator?

- A. 10 HP
- B. 20 HP
- C. 40 HP
- D. 50 HP

Ans. B

Ans. D

86. A uniform horizontal pipe of length 120 cm leads from a reservoir holding water to a depth of 90 cm above the open end of the pipe. What minimum length of piezometer is required to measure pressure at a point 40 cm from the open end?

- A. 90 cm
- B. 60 cm
- C. 30 cm
- D. 10 cm

Ans. C

87. Consider the following statements in respect of a steady two-dimensional rotational flow:

- 1) Continuity is satisfied and streamlines can be drawn
- 2) Both stream function and velocity potential exist.

Which of the statements given above is/are correct?

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

Ans. A

88. Which of the following statement is correct?

The portal method of structural analysis is generally suitable for:

- A. tall buildings
- B. Low rise buildings
- C. Low rise buildings with uniform framing
- D. Low rise buildings with non-uniform framing

Ans. D

89. If the discharge required for different crops grown in the field is 0.4 cumecs, and the capacity factor and time factor are 0.8 and 0.5, the design discharge for the distributary will be:

- A. 0.80 cumecs
- B. 0.16 cumecs
- C. 1 cumec
- D. 1.24 cumecs

Ans. C

90. The coefficient of variation of the rainfall for six rain gauge stations in catchment was found to be 29.54%. The optimum number of stations in the catchment for an admissible 10% error in the estimation of the mean rainfall will be:

- A. 3
- B. 6
- C. 9
- D. 12

Ans. C

91. In 36 minutes, the minute hand gains over the hour hand by _____?

- A. 110°
- B. 185°
- C. 198°
- D. 175°

Ans. C

92. Column splices are used to

- A. Decrease the length of column
- B. Increase the length of column
- C. Decrease strength of column
- D. Increase strength of column

Ans. B

93. Consider the following valves used in rapid sand filter unit:

- (i) Influent valve
- (ii) Filtered water outlet valve
- (iii) Backwash water inlet valve
- (iv) Wash water drain valve

Which of these valves should be closed while backwashing the rapid sand filter:

- A. ii and iii
- B. i and ii
- C. i and iv
- D. iii and iv

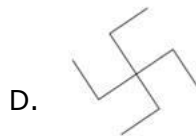
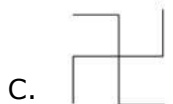
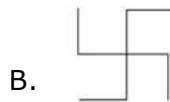
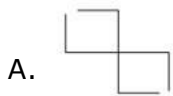
Ans. B

94. What is the concentration of H⁺ ions in moles/L in water if the pOH value is 5?

- A. 10⁻⁶
- B. 10⁻⁷
- C. 10⁻⁸
- D. 10⁻⁹

Ans. D

95. **Four figures have been given out of which three are alike in some manner, while one is different. Choose the odd one.**



Ans. A

96. Shear failure are classified into how many types?

- A. One
- B. Two
- C. Three
- D. Four

Ans. B

97. **Select the set of letters that when sequentially placed in the blanks of the given letter series will complete the series.**

ST __ S _ OPS __ P

- A. STPOS
- B. POTTO
- C. TOTPO
- D. OPTTO

Ans. D

98. Who has been appointed as the first Chief Information Officer of the US Army, after the Pentagon created the position in July 2020?

- A. Neera Tonden
- B. Rohini Kosoglu
- C. Ali Zaidi
- D. Raj Iyer
- E. Vivek Murthy

Ans. D

99. Which bank has signed MoU with National Small Industries Corporation (NSIC) for providing credit support to the micro, small and medium enterprise (MSME) sector?
- A. ICICI Bank
 - B. HDFC Bank
 - C. Axis Bank
 - D. Yes Bank
 - E. IndusInd Bank

Ans. B

100. Third edition of bilateral maritime exercise 'Samudra Shakti 2021' was conducted between India and which country?
- A. Singapore
 - B. Malaysia
 - C. Indonesia
 - D. Vietnam
 - E. Australia

Ans. C
