



# SSC JE

## CIVIL MODEL PAPER - EBOOK

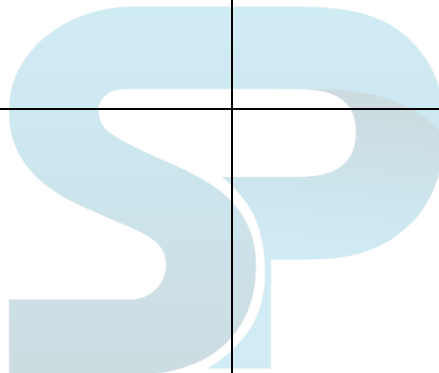


SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

## Stay Connected With SPNotifier



TM



**EBooks for Bank Exams, SSC & Railways 2020**

**General Awareness EBooks**

**Computer Awareness EBooks**

**Monthly Current Affairs Capsules**



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

**150**  
**MOST IMPORTANT HISTORY GK QUESTIONS FOR ALL**  
Competitive Exams  
www.spllessons.com

**SSC CHSL**  
**GENERAL AWARENESS 1150+ PREVIOUS YEARS QUESTIONS**  
www.spllessons.com

**SSC CGL**  
**General Awareness 1150+ Previous Years Questions**  
www.spllessons.com

**REASONING ABILITY**  
**Blood Relations**  
www.spllessons.com



[Click Here to Download the E Books for Several Exams](#)

Click here to check the topics related [SSC JE](#)

[SSC JE ID Verification](#)

[SSC JE Instructions](#)

[SSC JE Exam Duration](#)

[SSC JE FAQ Test Day](#)



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

### 1. The Parliament of India cannot be regarded as a sovereign body because

- A. it can legislate only on subjects entrusted to the Centre by the Constitution
- B. it has to operate within the limits prescribed by the Constitution
- C. the Supreme Court can declare laws passed by parliament as unconstitutional if they contravene the provisions of the Constitution
- D. All of the above

Answer: D

### 2. The name of the Laccadive, Minicoy and Amindivi islands was changed to Lakshadweep by an Act of Parliament in

- A. 1970
- B. 1971
- C. 1972
- D. 1973

Answer: D

### 3. The members of the Rajya Sabha are elected by

- A. the people
- B. Lok Sabha
- C. elected members of the legislative assembly
- D. elected members of the legislative council

Answer: C

### 4. The members of the panchayat are

- A. nominated by the district officer
- B. the electorates of the respective territorial constituencies
- C. nominated by local self-government minister of the state
- D. nominated by the block development organization

Answer: DB

### 5. The power to decide an election petition is vested in the

- A. Parliament
- B. Supreme Court
- C. High courts
- D. Election Commission



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

Answer: C

**6. The present Lok Sabha is th**

- A. 14th Lok Sabha
- B. 15th Lok Sabha
- C. 16th Lok Sabha
- D. 17th Lok Sabha

Answer: D

**7. The Battle of Plassey was fought in**

- A. 1757
- B. 1782
- C. 1748
- D. 1764

Answer: A

**8. The territory of Porus who offered strong resistance to Alexander was situated between the rivers of**

- A. Sutlej and Beas
- B. Jhelum and Chenab
- C. Ravi and Chenab
- D. Ganga and Yamuna

Answer: B

**9. Under Akbar, the Mir Bakshi was required to look after**

- A. military affairs
- B. the state treasury
- C. the royal household
- D. the land revenue system

Answer: A

**10. Tripitakas are sacred books of**

- A. Buddhists
- B. Hindus
- C. Jains
- D. None of the above

Answer: A



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

11. The trident-shaped symbol of Buddhism does not represent

- A. Nirvana
- B. Sangha
- C. Buddha
- D. Dhamma

Answer: A

12. The Paithan (Jayakwadi) Hydro-electric project, completed with the help of Japan, is on the river

- A. Ganga
- B. Cauvery
- C. Narmada
- D. Godavari

Answer: D

13. The percentage of irrigated land in India is about

- A. 45
- B. 65
- C. 35
- D. 25

Answer: C

14. The southernmost point of peninsular India, that is, Kanyakumari, is

- A. north of Tropic of Cancer
- B. south of the Equator
- C. south of the Capricorn
- D. north of the Equator

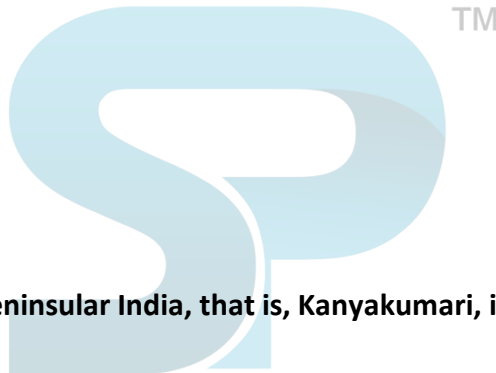
Answer: D

15. The pass located at the southern end of the Nilgiri Hills in south India is called

- A. the Palghat gap
- B. the Bhorghat pass
- C. the Thalghat pass
- D. the Bolan pass

Answer: A

16. Which of the following factors are responsible for the rapid growth of sugar production in south India as compared to north India?





## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

- i. Higher per acre field of sugarcane
  - ii. Higher sucrose content of sugarcane
  - iii. Lower labour cost
  - iv. Longer crushing period
- A. I and II
  - B. I, II and III
  - C. I, III and IV
  - D. I, II and IV

Answer: D

**17. In which year was Pulitzer Prize established?**

- A. 1917
- B. 1918
- C. 1922
- D. 1928

Answer: A

**18. Gandhi Peace Prize for the year 2000 was awarded to the former President of South Africa along with**

- A. Sathish Dawan
- B. C. Subramanian
- C. Grameen Bank of Bangladesh
- D. World Health Organisation

Answer: C

**19. The prestigious Ramon Magsaysay Award was conferred was conferred upon Ms. Kiran Bedi for her excellent contribution to which of the following fields?**

- A. Literature
- B. Community Welfare
- C. Government Service
- D. Journalism

Answer: C

**20. Which of the following societies has instituted an award for an outstanding parliamentarian?**

- A. Jamanlal Bajaj Foundation
- B. Institute of Constitutional and Parliamentary Studies
- C. G. B. Pant Memorial Society
- D. R. D. Birla samara Kosh





## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

Answer: C

**21. B. C. Roy Award is given in the field of**

- A. Music
- B. Journalism
- C. Medicine
- D. Environment

Answer: C

**22. Non Tax revenues can be increased by improving the working of the**

- A. State Road Transport Corporations
- B. electricity boards
- C. commercial irrigation projects
- D. All of the above

Answer: C

**23. Which of the following is not viewed as a national debt?**

- A. Provident Fund
- B. Life Insurance Policies
- C. National Saving Certificate
- D. Long-term Government Bonds

Answer: C

**24. The condition of indirect taxes in the country's revenue is approximately**

- A. 70 percent
- B. 75 percent
- C. 80 percent
- D. 86 percent

Answer: D

**25. Deficit financing means that the government borrows money from the**

- A. RBI
- B. local bodies
- C. big businessmen
- D. IMF

Answer: A

**26. Revenue of the state governments are raised from the following sources, except**



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

- A. entertainment tax
- B. expenditure tax
- C. agricultural income tax
- D. land revenue

Answer: C

**27. Who is the author of the book 'Freedom Behind Bars'?**

- A. Kiran Bedi
- B. Jawaharlal Nahru
- C. Sheikh Abdullah
- D. Nelson Mandela

Answer: A

**28. The book 'A Farewell to Arms' was written by**

- A. Charles Dickens
- B. Ernest Hemingway
- C. Thomas Hardy
- D. Huxley

Answer: B

**29. 'Ek Doctor Ki Maut' is a film directed by**

- A. Gautam Gosh
- B. Tapan Sinha
- C. Meera nair
- D. Shyam Benegal

Answer: B

**30. The book 'Satanic Verses' was written by**

- A. Gunnar Myrdal
- B. William Golding
- C. Salman Rushdie
- D. Agatha Christie

Answer: C

**31. Who has won the Gyan Peeth Award for her book 'Yama'?**

- A. Maheswari Devi





## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

- B. Asha Poorna Devi
- C. Amrita Preetam
- D. Mahadevi Verma

Answer: D

**32. Before the independence of India, Dadra and nagar haveli were under the administrative control of ?**

- A. English
- B. French
- C. Portuguese
- D. Afgans

Answer: C

**33. Who among the following was the first chief Justice of India and assumed office on 26th Jan. 1950 ?**

- A. Meher Chand mahajan
- B. Patanjali sastri
- C. Harilal Kania
- D. BK Mukherjea



Answer: C

**34. Which Constitutional Article lays down the provision for a National Commission for SC and ST ?**

- A. Article 337
- B. Article 334
- C. Article 338
- D. Article 339

Answer: C

**35. Which community gets special provision for Central Services in Article 336?**

- A. Sikh Community
- B. Muslim Community
- C. Hindu Community
- D. Anglo-Indian Community

Answer: D

**36. Who composed the famous song 'Sare Jahan SeAchha'?**

- A. Jaidev



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

- B. Mohammad Iqbal
- C. Bankim Chandra Chattopadhyay
- D. Rabindranath Tagore

Answer: B

37. In which of the following festivals are boat races a special feature?

- A. Onam
- B. Rongali Bihu
- C. Navratri
- D. Pongal

Answer: A

38. Kalchakra ceremony is associated with which of the following ceremonies?

- A. Hinduism
- B. Buddhism
- C. Jainism
- D. Islam

Answer: B

39. Which of the following places is famous for Chikankari work, which is a traditional art of embroidery?

- A. Lucknow
- B. Hyderabad
- C. Jaipur
- D. Mysore

Answer: A

40. Dinar is the currency of which of the following countries?

- A. Bahrain
- B. Brazil
- C. Bhutan
- D. Georgia

Answer: A

41. The capital of New Zealand is

- A. Wellington
- B. Auckland





## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

- C. Christchurch
- D. Napier

Answer: A

**42. Phnom Penh is the capital of which of the following country?**

- A. Denmark
- B. Canada
- C. Cambodia
- D. Cuba

Answer: C

**43. Which is the capital of Tajikistan?**

- A. Moscow
- B. Dodoma
- C. Damascus
- D. Dushanbe

Answer: D

**44. Arunachal Pradesh celebrates its statehood Day on which date?**

- A. 18th February
- B. 19th February
- C. 20th February
- D. 21st February

Answer: C

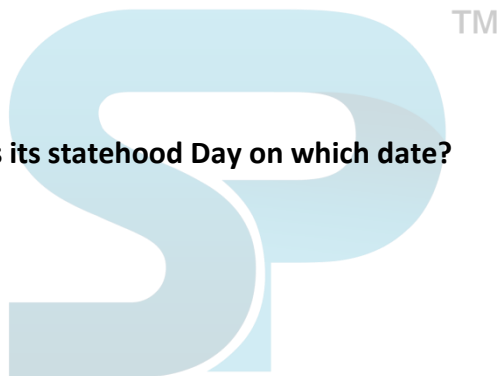
**44. Chhatrapati Shivaji Maharaj Jayanti is celebrated on which date?**

- A. 17th February
- B. 18th February
- C. 19th February
- D. 20th February

Answer: C

**46. Soil Health Card Day is observed on which date?**

- A. 17th February
- B. 18th February
- C. 19th February
- D. 20th February





## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

Answer: C

47. The government of India is to roll out BS-VI on which date?

- A. 1st March
- B. 1st April
- C. 1st May
- D. 1st June

Answer: B

48. Which of the following anti-satellite missile is tested by India on 27 March, 2019?

- A. Mission Antriksh
- B. Mission Gagan
- C. Mission Shakti
- D. Mission Destruction

Answer: C

49. Which state of India became first to reserve a government job for HIV positive candidates?

- A. Uttar Pradesh
- B. Mizoram
- C. Kerala
- D. Maharashtra

Answer: C

50. Which of the following creature is linked with the moon pollution?

- A. Tardigrades
- B. Water Bears
- C. Both A and B
- D. Neither A nor B

Answer: C

51. Odometer is to mileage as compass is to

- A. speed
- B. hiking
- C. needle
- D. direction

Answer: D



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

**Explanation:** An odometer is an instrument used to measure mileage. A compass is an instrument used to determine direction. Choices a, b, and c are incorrect because none is an instrument.

**52. Marathon is to race as hibernation is to**

- A. winter
- B. bear
- C. dream
- D. sleep

**Answer:** D

**Explanation:** A marathon is a long race and hibernation is a lengthy period of sleep. The answer is not choice a or b because even though a bear and winter are related to hibernation, neither completes the analogy. (Choice c) is incorrect because sleep and dream are not synonymous.

**53. Window is to pane as book is to**

- A. novel
- B. glass
- C. cover
- D. page

**Answer:** D

**Explanation:** A window is made up of panes, and a book is made up of pages. The answer is not (choice a) because a novel is a type of book. The answer is not (choice b) because glass has no relationship to a book. (Choice c) is incorrect because a cover is only one part of a book; a book is not made up of covers.

**54. Cup is to coffee as bowl is to**

- A. dish
- B. soup
- C. spoon
- D. food

**Answer:** B

**Explanation:** Coffee goes into a cup and soup goes into a bowl. Choices a and c are incorrect because they are other utensils. The answer is not choice d because the word food is too general.

**55. Yard is to inch as quart is to**

- A. gallon
- B. ounce
- C. milk
- D. liquid



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

**Answer:** B

**Explanation:** A yard is a larger measure than an inch (a yard contains 36 inches). A quart is a larger measure than an ounce (a quart contains 32 ounces). Gallon (choice a) is incorrect because it is larger than a quart. Choices c and d are incorrect because they are not units of measurement.

### 56. Extreme old age when a man behaves like a fool

- A. Imbecility
- B. Senility
- C. Dotage
- D. Superannuation

**Answer:** C

### 57. That which cannot be corrected

- A. Unintelligible
- B. Indelible
- C. Illegible
- D. Incurable

**Answer:** C

### 58. The study of ancient societies

- A. Anthropology
- B. Archaeology
- C. History
- D. Ethnology



**Answer:** B

### 59. A person of good understanding knowledge and reasoning power

- A. Expert
- B. Intellectual
- C. Snob
- D. Literate

**Answer:** B

### 60. A person who insists on something

- A. Disciplinarian
- B. Stickler
- C. Instantaneous
- D. Boaster





## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

Answer: B

**(Direction 61-65): Study the following information carefully and answer the given questions.**

For a recruitment process in an organization, the candidates need to possess the following qualifications/criteria.

- I. A graduate in science with atleast 60% marks.
- II. An age of at least 25 years and not more than 40 years as on 01.08.2016
- III. Have a post-qualification work experience of at least 2 years.
- IV. Should have secured 55% marks in the selection procedure.

However, if the candidate fulfils the above mentioned criteria except

(A) at (I) and if the candidate is not a graduate in Science but has a post graduation degree with minimum of 60% marks, he/she should be referred to the HR Manager of the organization.

(B) at (III) and if the candidate fulfils all the eligibility criteria but of post-qualification work experience but has secured 75% of marks in the selection process, he/she may be referred to the Director of the organization

Based on the above information study carefully whether the following candidates are eligible for the recruitment process and mark your answer.

**61. Shalini has 4 years of post qualification work experience in a top organization. She has secured 59% marks in the selection process. Born on 5.10.1990. she has completed her Bachelor's degree in Physics and secured 66% marks in it.**

- A. if the candidate is to be selected.
- B. if the candidate is not to be selected.
- C. if the candidate may be referred to the HR – Manager.
- D. if the candidate may be referred to the Director.

Answer: A

**62. Peter has 6 years of post qualification work experience. His Date of Birth is 12.04.1988. He has secured 58% marks in the selection process. He has completed graduation in Science and scored 76% in it.**

- A. if the candidate is to be selected.
- B. if the candidate is not to be selected.
- C. if the candidate may be referred to the HR – Manager
- D. if the candidate may be referred to the Director.

Answer: A



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

**63. Ahmed has completed graduation and post graduation in Economics from Bhopal in and has secured 51% and 68% marks respectively. His Date of Birth is 26.11.1980. He has been working as an executive in a reputed firm since 2006 till date. He has secured 56% marks in the selection process.**

- A. if the candidate is to be selected.
- B. if the candidate is not to be selected.
- C. if the candidate may be referred to the HR – Manager
- D. if the candidate may be referred to the Director.

Answer: C

**64. Harshita has done graduation and post graduation in Physics and has secured 57% and 65% marks respectively. She has secured 59% marks in the selection process, and has a post-qualification work experience of three years.**

- A. if the candidate is to be selected.
- B. if the candidate is not to be selected.
- C. if the candidate may be referred to the HR – Manager
- D. if the data provided is inadequate to take the decision

Answer: D

**65. Deepak has completed graduation and post graduation in Geography with 68% and has secured 57% marks in the selection process. His Date of Birth is 11.11.1985.**

- A. if the candidate is to be selected.
- B. if the candidate is not to be selected.
- C. if the candidate may be referred to the HR – Manager
- D. if the data provided is inadequate to take the decision

Answer: E

**(Direction 66-70) Read the following information carefully to answer the following questions**

'P # Q' means 'P is the daughter of Q'

'P © Q' means 'Q is the brother of P'

'P = Q' means 'Q is the sister of P'

'P & Q' means 'P is the son of Q'

'P \* Q' means 'P is the father of Q'

'P @ Q' means 'P is the mother of Q'

**66. What does the expression 'A @ C = B © D & E'?**



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

- A. E is the husband of A
- B. C is the son of E
- C. C is the daughter of E
- D. E is the wife of A

Answer: A

67. Which of the following indicates that 'W is the paternal uncle of P'?

- A.  $W \& U \# Q @ R \odot P$
- B.  $W \& U \& R @ Q \odot P$
- C.  $P \& R \& Q @ U \odot W$
- D.  $P \& Q \# U @ R \odot W$
- E. None of these

Answer: C

68. Which of the following can be the correct conclusion drawn from the expression ' $O = P \# Q \odot V * W$ '?

- A. W is the grandson of P
- B. O is the uncle of Q
- C. Q is the uncle of W
- D. None of these

Answer: D

69. Which of the following can be correct conclusion drawn from the expression ' $A \& C @ D \odot G = H$ '?

- A. D is the brother of H
- B. C has two sons and two daughters
- C. D is the sister of H
- D. H is the sister of A

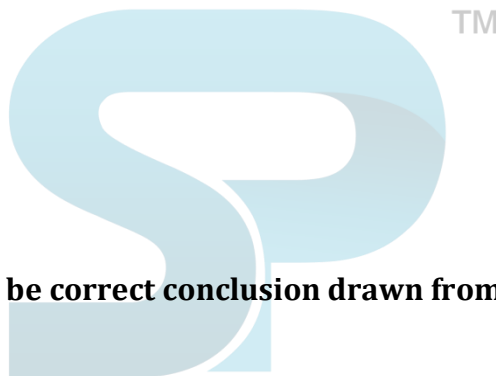
Answer: D

70. Which of the following indicates 'A is the daughter of E'?

- A.  $Q * P \# C @ N @ V$
- B.  $E * D \# R @ A @ B$
- C.  $F @ E \# R * A$
- D.  $F \odot A = B \# E$

Answer: B

71. Pointing to a photograph of a boy Suresh said, "He is the son of the only son of my mother." How is Suresh related to that boy?





## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

- A. Brother
- B. Uncle
- C. Cousin
- D. Father

**Answer:** D

**Explanation:** The boy in the photograph is the only son of the son of Suresh's mother i.e., the son of Suresh. Hence, Suresh is the father of boy.

**72. If A + B means A is the mother of B; A - B means A is the brother B; A % B means A is the father of B and A x B means A is the sister of B, which of the following shows that P is the maternal uncle of Q?**

- A.  $Q - N + M \times P$
- B.  $P + S \times N - Q$
- C.  $P - M + N \times Q$
- D.  $Q - S \% P$

**Answer:** C

**Explanation:**  $P - M \rightarrow$  P is the brother of M

$M + N \rightarrow$  M is the mother of N

$N \times Q \rightarrow$  N is the sister of Q

Therefore, P is the maternal uncle of Q.

**73. If A is the brother of B; B is the sister of C; and C is the father of D, how D is related to A?**

- A. Brother
- B. Sister
- C. Nephew
- D. Cannot be determined

**Answer:** D

**Explanation:** If D is Male, the answer is Nephew.

If D is Female, the answer is Niece.

As the sex of D is not known, hence, the relation between D and A cannot be determined.

**Note:** Niece - A daughter of one's brother or sister, or of one's brother-in-law or sister-in-law.  
Nephew - A son of one's brother or sister, or of one's brother-in-law or sister-in-law.

**74. If A + B means A is the brother of B; A - B means A is the sister of B and A x B means A is the father of B. Which of the following means that C is the son of M?**



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

- A.  $M - N \times C + F$
- B.  $F - C + N \times M$
- C.  $N + M - F \times C$
- D.  $M \times N - C + F$

Answer: D

Explanation:  $M \times N \rightarrow M$  is the father of  $N$

$N - C \rightarrow N$  is the sister of  $C$

and  $C + F \rightarrow C$  is the brother of  $F$ .

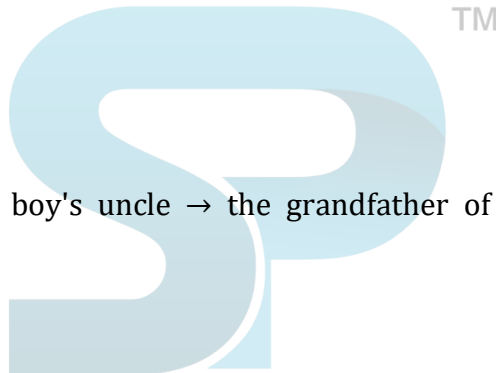
Hence,  $M$  is the father of  $C$  or  $C$  is the son of  $M$ .

**75. Introducing a boy, a girl said, "He is the son of the daughter of the father of my uncle." How is the boy related to the girl?**

- A. Brother
- B. Nephew
- C. Uncle
- D. Son-in-law

Answer: A

Explanation: The father of the boy's uncle  $\rightarrow$  the grandfather of the boy and daughter of the grandfather  $\rightarrow$  sister of father.



**76. In which of these expressions 'I > K' be definitely false?**

- A.  $I > P \geq Q = G \geq R > K$
- B.  $P < A \leq I \leq T; K \geq O > T$
- C.  $K \leq A \leq L = R < I$
- D.  $I > C > = F \leq H; K < F$

Answer: B

**77. Which of the following symbols should be placed in the blank spaces respectively (in the same order from left to right) in order to complete the given expression in such a manner that both 'F > N' as well as 'N ≤ B' definitely holds true? B \_ A \_ N \_ E \_ F**

- A.  $>, \geq, <, =$
- B.  $>, >, \geq, <$
- C.  $\geq, \geq, \geq, \leq$
- D.  $\geq, =, \leq, <$

Answer: D



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

78. In Which of the following expressions does the expression ' $I \geq D$ ' to definitely hold true?

- A.  $K \geq I \leq R = P < S \leq D$
- B.  $U \geq D \geq M = F \leq A \geq I$
- C.  $I \geq C \geq Q \geq B = N \geq D$
- D.  $G \geq I = A < B \leq S \leq D$

Answer: C

79. Which of the following expressions is true if the expression  $P < T \leq B > S > M \geq E$  is definitely true?

- A.  $E \leq P$
- B.  $S < P$
- C.  $M > P$
- D.  $E < S$

Answer: D

80. Statements:  $Y \leq K < D = S$ ;  $D < B < O$ ;  $A \geq D < Z$

Conclusions: i.  $A > B$ , ii.  $Y < Z$

- A. Only I is true
- B. Only II is true
- C. Either I or II true
- D. Neither I nor II is true

Answer: B



81. A person starts walking from a point A in north direction and after covering 20 meter, he took a right turn and walk 20 meter more. After that he turns to his right and walks 40 meter before turning to left and walks 20 meters more. After that he took a left turn and walks 10 meter and finally took a right turn and walk 50 meters and stopped at point B. Now he is facing which direction?

- A. east
- B. west
- C. north
- D. south

Answer: A

82. A person starts walking in south and after walking 20 meters he took a left turn and walks 30 meter and finally took a right turn and stopped after walking 40 meters. Find the distance between his initial position to final position?

- A.  $20\sqrt{5}$



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

- B.  $30\sqrt{5}$
- C.  $40\sqrt{5}$
- D.  $55\sqrt{5}$

Answer: B

83. A dog run 20m towards East and Turns to right runs 10m and turns to right runs 10m and again turns to left run 5m and then turns to left runs 12m and finally turns to left and runs 5m. Now which direction cat facing?

- A. south
- B. north
- C. east
- D. west

Answer: C

84. Two persons A and B are at a distance of 10 meters from each other in west-east direction respectively. A starts walking in north and B starts walking south and move 5 meter respectively. Then A and B takes right and left turn respectively and stopped after travelling 5 meter each. Find the distance between both of them

- A.  $10\sqrt{3}$
- B.  $10\sqrt{5}$
- C.  $10\sqrt{2}$
- D.  $10\sqrt{7}$

Answer: C

85. Amit starts walking in east direction and after travelling some distance he took a right turn and then a left turn followed by another left turn. Now he again took a right turn and finally took a left turn. In which direction is Amit walking.

- A. south
- B. north
- C. east
- D. west

Answer: B

**(Direction 86 – 90): Study the following information carefully and answer the given questions.**

In a certain code language,

“facing problems with health” is coded as “ka la ho ga”.

“health problems on rise” is coded as “ho mo la ta”.



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

“rise with every challenge” is coded as “zi ta ga ne”.

“facing challenge each day” is coded as “ki ka zi pa”.

**86. What could be the code for ‘ta’?**

- A. Health
- B. Rise
- C. Problems
- D. Every

Answer: B

**87. ‘ta na zi’ could be a code for which of the following?**

- A. health rise challenge
- B. rise above challenge
- C. day rise challenge
- D. every challenge rise

Answer: B

**88. ‘ho ki ga’ could be a code for which of the following?**

- A. challenge facing with
- B. challenge with health
- C. with health day
- D. problem every day

Answer: C

**89. What could be the code for ‘health’ in the given language?**

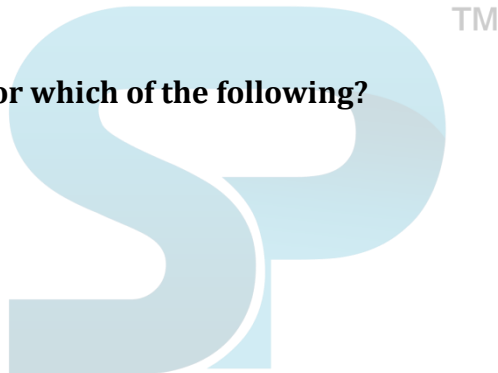
- A. ho
- B. la
- C. ga
- D. Cannot be determined

Answer: D

**90. Which of the following is the code for ‘facing’?**

- A. ka
- B. ki
- C. la
- D. pa

Answer: A







## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

**91. Statement:** Mexico's ruling Institutional Revolutionary Party (PRI), which has dominated its politics for the better part of a century, seems at risk of a defeat in the July 1 election.

**Conclusions:**

- I. The PRI has won most of the elections held in Mexico in the last 100 years.
  - II. The PRI will no longer remain the reigning party in Mexico post July.
  - III. The leaders of PRI seemed to have irked the sentiments of the common people in Mexico.
- A. Only I follow
  - B. Only II follow
  - C. Both I and II follow
  - D. Both II and III follow

**Answer:** A

**Explanation:** Only conclusion I follows from the given statement. We have been told that the PRI has dominated Mexico's politics for the better part of a century, from which we can easily conclude that they've won most of the elections that have been held in Mexico in the last 100 years. Conclusion II does not follow because we do not know for certain of the PRI is going to lose in the coming elections. The statement tells us that the ruling party seems to be at a risk of defeat. Conclusion II does not follow as we do not know the reasons for assuming that the ruling party might not win the upcoming elections.

**92. Statement:** Overwhelmed with grief and anger, families have been returning to what is left of their homes in the Old City of Mosul, following its liberation from Isis, the terrorist organization.

**Assumptions:**

- I. The terrorist organization, Isis, destroyed the Old City of Mosul before they left.
  - II. Most of the residents of Mosul had left/ been driven away when Isis took over their city.
  - III. None of the residents of Mosul supported Isis, which is why they left the city.
- A. If only assumption I is implicit.
  - B. If only assumption II is implicit.
  - C. If only assumption III is implicit.
  - D. If both I and II are implicit.

**Answer:** D

**Explanation:** Both assumptions I and II are valid. The statement says that people are returning to "what is left of their homes", from which we can assume that their homes were almost destroyed. Similarly, because the families are returning to the city, we can assume that they were driven away



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

or left when Isis took over their city. However, assumption III is not valid as we cannot assume if all of the residents had left and none of them supported Isis from the given statement.

93. **Statement:** Digital payment systems have ballooned in popularity in India since the government scrapped large-value banknotes in 2016.

### Assumptions:

I. People find it easier to pay via electronic methods instead of by cash these days.

II. The common people have realised the convenience of digital payments, which is why it gained popularity.

III. Digital payments methods have become popular in India because of good advertising.

- A. Only I follow
- B. Only II follow
- C. Both I and II follow
- D. Both II and III follow

Answer: C

### Explanation:

Both inferences I and II follow. The given statement says that digital payments have grown in popularity since the government scrapped large value banknotes more than a year ago. We can easily infer that people must have found the new mode of payment easy and convenient, which is why they stuck to this method even after more than a year.

### 94. Statement:

A Government advertisement in public interest- "For a child's better mental health, admit him/her to a school only after five years of age."

### Assumptions:

I. A child cannot learn before he/she turns five.

II. Some school admit children who are below five years of age.

- A. If only assumption I is implicit.
- B. If only assumption II is implicit.
- C. If either I or II is implicit.
- D. If neither I nor II is implicit.

Answer: B

### Explanation:



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

A child can learn before he/she turns five. So, assumption I is not implicit.

Some schools admit children who are below five years of age, so government gives that advertisement.

So, assumption II is implicit.

**95. Statement:** Should students be allowed to work while they are studying?

**Arguments:**

I. Yes. The economic background if every individual does not allow them to pursue education, such permission therefore makes it feasible to fulfill one's dream.

II. Yes. Work play an important role in making a person self sufficient. Besides, this practical knowledge becomes necessary to make studies meaningful.

- A. If only argument I is implicit.
- B. If only argument II is implicit.
- C. If either I or II is implicit.
- D. If neither I nor II is implicit.

**Answer:** D

**Explanation:** From argument I, it concludes that if a person is not able to pursue their education then by working in the real world helps them to make their dream come true.

From argument II, working also increases the practical knowledge of the person and it makes the studies meaningful and makes a man self-sufficient.

Hence, both argument I and II are strong.

**96. If in a certain code MANAGEMENT is written as NTNAGEMAME. How DISTRIBUTE is written in that code.**

- A. RIBUDITEST
- B. TESTRIBUDI
- C. TESTRIDIBU
- D. TESTDIRIBU

**Answer:** C

**Explanation:** MANAGEMENT => MA - 1, NA- 2, GE- 3, ME - 4, NT - 5.

Now the code follow - 52314

So for DISTRIBUTE=> DI-1, ST-2, RI -3, BU -4, TE- 5

So code will be - TESTRIDIBU



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

97. In a certain code SCHOOL is written as RMGPNM. How TEACHER is written in that code.

- A. SFZDGFQ
- B. SFZFQDG
- C. SFZQDGF
- D. DQGFSFZ

Answer: A

Explanation: +1, - 1, +1, -1 .....

98. In a certain code PRINCIPAL is written as MBQJMOJSQ. How will SOCIETY will be written in that code.

- A. ZUJDPTF
- B. ZUFJDPT
- C. ZUFDJPT
- D. ZUJFDTP

Answer: B

Explanation: Write the word in reverse order and then increase by one

99. In certain code RAILWAY is written as SBJLUZX. How SPARROW is written in that code.

- A. TQBRQNV
- B. TQRBQNB
- C. TQNVBQB
- D. TQNVBRQ

Answer: A

Explanation: First three letter are increased by one, then fourth one is as it is and then last three are decreased by one.

100. In a certain code METRO is written as NVGIL. How will COUNTRY will be written in that code.

- A. XLFMGIB
- B. XLFMIGB
- C. XMLFGIB
- D. XMLFBIG

Answer: A

Explanation: Corresponding letter sum = 27 (M + N = 27, E+V = 27 .....

101. Which of the following is the reason for the decrease in the use of stones as building material?



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

- A. Steel and R.C.C. are less bulky and more durable
- B. strength of stones cannot be rationally analyzed
- C. stones are not conveniently available in plains
- D. All options are correct

**Answer:** D

**Explanation:** The strength of stone cannot easily determine in comparison to steel and RCC, and also its not easily available in plans.

**102. The solidification of molten magma when it reaches the surface of earth results in the formation of**

- A. sedimentary rocks
- B. metamorphic rocks
- C. basalts and traps
- D. granite

**Answer:** C

**Explanation:** Granite, basalt and traps are the igneous rock Granite<sup>TM</sup> cools above earth surface Basalt and traps cools below earth surface.

**103. The argillaceous rocks have their principal constituents as**

- A. lime
- B. clay
- C. sand
- D. None of these

**Answer:** B

**Explanation:** Argillaceous racks having the followings mineral forming constituents Kaolinite, illite and montmorillonite These are the caly forming mineral.

**104. When a brick is cut into two halves longitudinally, one part is called :-**

- A. king closer
- B. cornice brick
- C. queen closer
- D. voussoiring

**Answer:** C

**Explanation:** When cut from both the half part knows as king closer, and only in half part known as queen closer.

**105. The red colour obtained by the bricks is due to the presence of :-**



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

- A. lime
- B. silica
- C. manganese
- D. iron oxide

Answer: D

Explanation: Iron oxide induces reddish brown colour in brick while manganese yellowish tint.

**106. Which constituent of the cement, upon addition of water, sets and hardens first?**

- A. tri-calcium silicate
- B. tri-calcium aluminate
- C. di-calcium silicate
- D. free lime

Answer: B

Explanation: Tri calcium aluminate is the first forming complex compound on addition of water in cement within 24 hour, responsible for max heat of evolution.

**107. The aggregate is called fine aggregate if it is completely retained on**

- A. 0.15 mm sieve
- B. 0.30 mm sieve
- C. 4.75 mm sieve
- D. None of these

Answer: A

Explanation: Fine sand ranges from 0.075 mm to 0.425 mm In which 0.075 to 0.15 fine sand 0.15 to 0.30 medium 0.30 to 4.75 course sand.

**8. The solution of salts from the soil absorbed by the trees which becomes a viscous solution due to loss of moisture and action of carbon dioxide is Known as :-**

- A. pith
- B. cambium
- C. bark
- D. sap

Answer: D

Explanation:

Solution: Sap in between cambium layer and heartwood, sap contains moisture.

**9. Shingle is**



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

- A. water bound pebbles
- B. disintegrated laterite
- C. crushed granite
- D. None of these

Correct Answer: B

Answer: B

Explanation: Shingles are form due to disintegration of laterite soils.

**10. Good quality sand is never obtained from which of the following source?**

- A. riverbed
- B. nala
- C. sea
- D. gravel powder

Answer: C

Explanation: Good quality of sand found from the bed of river. <sup>TM</sup>

**111. Pick up the excavation where measurements are made in square metres for payment.**

- A) Ordinary cuttings up to 1 m
  - B) Surface dressing up to 15 cm depths
  - C) Surface excavation up to 30 cm depths
- A. A only
  - B. B only
  - C. C only
  - D. Both B and C

Answer: D

Explanation: Ordinary cutting up to 1m and surface dressing is not consider the measurement of volume works.

**112. The expected out turn of 2.5 cm cement concrete floor per mason per day**

- A. 2.5 square metre
- B. 5.0 square metre
- C. 7.5 square metre
- D. 10 square metre

Answer: C



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

**Explanation:** As per given building code manuals out-turn for 2.5 cm.... 7.5 square metre

**113. Portion of an embankment having a uniform up-gradient 1 in 500 is circular with radius 1000 m of the centre line. It subtends 180° at the centre. If the height of the bank is 1 m at the lower end, and side slopes 2:1, the earth work involved**

- A. 26,000 m<sup>3</sup>
- B. 26,500 m<sup>3</sup>
- C. 27,000 m<sup>3</sup>
- D. 27,500 m<sup>3</sup>

Correct Answer: D

**Answer:** D

**Explanation:** slope top radius is 500m, and we have bottom radius is 1000m.

Volume of truncated cone is  $3.14 \cdot h \cdot ((R \cdot R) + (r \cdot r) + (R \cdot r)) \cdot (1/3)$ .

$$= 3.14 \cdot 1 \cdot ((1000 \cdot 1000) + (500 \cdot 500) + (1000 \cdot 500)) \cdot (1/3).$$

$$= 27500 \text{ m}^3$$

**114. As per Indian Standard Specifications, the peak discharge for domestic purposes per capita per minute, is taken**

- A. 1.80 litres for 5 to 10 users
- B. 1.20 litres for 15 users
- C. 1.35 litres for 20 users
- D. All options are correct

**Answer:** D

**Explanation:** As per given the govt. of India manual.

**115. Pick up the item of work not included in the plinth area estimate**

- A. Wall thickness
- B. Room area
- C. Verandah area
- D. Courtyard area

**Answer:** D

**Explanation:** Plinth area estimate includes wall thickness, room area, verandah area, but not courtyard area.

**116. Pick up the correct statement from the following:**





## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

- A. The bent-up bars at a support resist the negative bending moment
- B. The bent up bars at a support resist the shearing force
- C. The bending of bars near supports is generally at 45 degree
- D. All options are correct

Answer: D

Explanation: Solution: All the points from IS 456:2000 provision of bent up bars.

### 117. The brick work is measured in square metre, in case of

- A. Honey comb brick work
- B. Brick flat soling
- C. Half brick walls or the partition
- D. All options are correct

Answer: D

Explanation: Length, depths are considerable much more than width. Hence measured only in square meter.

### 118. Brick walls are measured in square metre if the thickness of the wall is

- A. 10 cm
- B. 15 cm
- C. 20 cm
- D. None of these

Answer: A

Explanation: 10 cm wall is the half brick wall. Hence measured in square meter.

### 119. Pick up the correct statement in case of water supply.

- A) Pipes laid in trenches and pipes fixed to walls are measured separately
  - B) Cutting through walls and floors are included with the item
  - C) Pipes are classified according to their sizes and quality
  - D) In laying pipes, the method of jointing and fixing is specifically specified
- A. A only
  - B. B only
  - C. C only
  - D. A, B, C and D

Answer: D



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

**Explanation:** During water supply all the above things mainly depends upon numbers of joint placed into the pipe during laying, fitting operations.

Classification of pipe depends upon their size and quality.

**120. In case of laying gullies, siphons, intercepting traps, the cost includes**

- A. Setting and laying
- B. Bed concreting
- C. Connection to drains
- D. All options are correct

**Answer:** D

**Explanation:** Gullies, siphons, and traps involved all the above operational cost.

**121. For which of the following, will the chain surveying be well adopted one?**

- A. Large areas with difficult details
- B. Small surveys in open ground
- C. Small surveys with crowded details
- D. Large areas with simple details

**Answer:** B

**Explanation:** Chain surveying requires flat terrain and small in area.

**122. Which of the following leveling is carried out to determine the elevation difference between two points on the surface of earth?**

- A. Reciprocal leveling
- B. Simple leveling
- C. Longitudinal leveling
- D. Differential leveling

**Answer:** D

**Explanation:** Differential leveling adopted for two points on earth surface. Reciprocal leveling adopted when there are certain obstruction such as water bodies, lake, pond, river etc.

**123. Which of the following would represent the surface of the water level of a still lake?**

- A. Level surface
- B. Contour surface
- C. Horizontal surface
- D. None of these



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

Answer: A

**Explanation:** Still lake is the level surface. Contour is the geographical gradients. Horizontal surface is mean spheroidal surface of earth.

**124. A contour canal is \_\_\_\_\_.**

- A. irrigates only on one side
- B. does not needs bank on higher side
- C. is generally aligned parallel to the contour of the area
- D. All options are correct

Answer: D

**Explanation:** Contour canal is aligned along the geographical gradients that's why all options are true.

**125. Which of the following are the required corrections for runway length?**

- A. correction for elevation
- B. correction for gradient
- C. correction for temperature
- D. All options are correct

Answer: D

**Explanation:** elevation, gradients and temperature are the runway correction factors, that's why all are correct.

**126. The representation of general topography of a very flat terrain is possible only by**

- A. drawing contours at large interval
- B. drawing contours at small interval
- C. giving spot levels at large interval
- D. giving spot levels to salient features at close interval

Answer: D

**Explanation:** large intervals show flat terrain and small interval shows steep terrain.

**127. The telescope of a Dumpy level \_\_\_\_\_.**

- A. is rigidly fixed to the levelling head
- B. can be tilted in a vertical plane
- C. can be taken out of its supports and reversed
- D. permits interchange of eye piece and object glass



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

Answer: A

**Explanation:** It can not reversed, can not tilt in vertical direction, impossible to interchange eye piece and objective glass.

**128. Left swing is not much favoured in theodolite survey, because**

- A. most of surveyors are accustomed to right hand
- B. it is inconvenient to turn the telescope anti-clockwise
- C. the readings increase clockwise
- D. vertical scale comes to an inconvenient position to be read

Answer: C

**Explanation:** Left swing increases the reading which creates much more calculation and chances of error arrived.

Hence not much favoured.

**129. Point of tangency is the \_\_\_\_\_.**

TM

- A. beginning of the curve
- B. end of the curve
- C. common point where the radius changes
- D. common point where the radius and direction changes

Answer: B

**Explanation:** Tangency is the end point of curve where close traverse is formed.

**130. If the bearing of AB = N40W, bearing of BC = S70°E, then the value of  $\angle ABC$  is**

- A. 30 degree
- B. 70 degree
- C. 100 degree
- D. None of these

Answer: D

**Explanation:**  $\angle ABC = 110$

**131. The Rankine's theory for active earth pressure is based on the assumption that**

- A. The retained material is homogeneous and cohesion-less
- B. The frictional resistance between the retaining wall and the retained material is neglected
- C. The failure of the retained material takes place along a plane called rupture plane
- D. All options are correct



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

**Answer:** D

**Explanation:** In ranking assumption contact surface is assumed smooth that's why fractional resistance is neglected.

**132. The assumption made in the theory of reinforced cement concrete beam is that**

- A. All the tensile stresses are taken up by the steel reinforcement only
- B. The steel and concrete are stressed within its elastic limit
- C. There is sufficient bond between steel and concrete
- D. All options are correct

**Answer:** D

**Explanation:** All these assumptions are from IS:456-2000.

So all the options are correct.

**133. Vane shear test is used to find out shear strength of :-**

- A. Sandy soil
- B. Gravelly soil
- C. Clayey soil
- D. All options are correct

**Answer:** C

**Explanation:** Vane shear test best suited to fine grained soil such as soft clay, silty clay.

**134. Soil transported by wind is called**

- A. Aeolian soil
- B. Alluvial soil
- C. Marine soil
- D. Locustrine soil

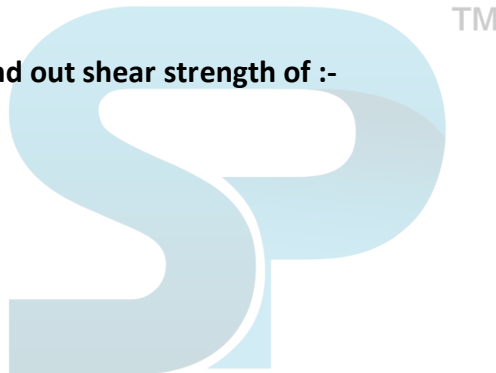
**Answer:** A

**Explanation:** Aeolian soil = transported by wind

Alluvial soil = transported by water

Marine soil = found around the costal areas

Locust Raine = deposited into the bed of lake.





## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

135. The maximum number of jets generally employed in an impulse turbine without jet interference is

- A. 2
- B. 6
- C. 4
- D. 8

Answer: B

Explanation: - Without jet interference maximum number of jets provided six.

136. In a Kaplan turbine runner, the number of blades is generally

- A. 2 to 4
- B. 8 to 16
- C. 4 to 8
- D. 16 to 24

Answer: C

Explanation: For Kaplan turbine number of blades ranges from 4 to 8.

137. A Pelton wheel working under a constant head and discharge, has maximum efficiency when the speed ratio is :-

- A. 0.26
- B. 0.46
- C. 0.36
- D. 0.56

Answer: B

Explanation: Pelton wheel when having the speed ratio is 0.46 it has maximum efficiency under const. head and discharge.

138. Which of the following statements is incorrect?

- A. The reaction turbines are used for low head and high discharge
- B. The angle of taper on draft tube is less than 8
- C. A Francis turbine is an impulse turbine
- D. None of these

Correct Answer: C

Answer: C



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

**Explanation:** Francis turbine is a Kaplan turbine follow the reverse archeamidies principal.

**139. The specific speed of a turbine is speed of an imaginary turbine, identical with the given turbine, which**

- A. delivers unit discharge under unit head
- B. delivers unit discharge under unit speed
- C. develops unit horse power under unit head
- D. develops unit horse power under unit speed

**Answer:** C

**Explanation:** Specific speed is defined as power generated by a turbine unit horse power under unit head.

**140. In a centrifugal pump casing, the flow of water leaving the impeller is**

- A. Radial
- B. Centrifugal
- C. Rectilinear
- D. Free vortex

**Answer:** D

**Explanation:** Water leaving the impeller is the vortex type flow and it is free vortex in nature.

**141. Newton's law of viscosity is a relationship between**

- A. Pressure, velocity and temperature
- B. Shear stress and rate of shear strain
- C. Shear stress and velocity
- D. Rate of shear strain and temperature

**4** Shear stress is directly proportional to rate of shear strain (velocity gradients) within the proportionality limit.

**142. A fluid whose viscosity does not change with the rate of deformation or shear strain is known as:**

- A. Real fluid
- B. Newtonian fluid
- C. Ideal fluid
- D. Non-Newtonian fluid

**Answer:** B

**Explanation:** Viscosity is constant means the graph show that straight line passing through origin.



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

**143. When the mach number is more than 6, the flow is called**

- A. Subsonic flow
- B. supersonic flow
- C. sonic flow
- D. hypersonic flow

**Answer:** D

**Explanation:** Mach no. = inertia force/elasticity force when its ration more than 6 it nature become hypersonic flow.

**144. Viscous force is the \_\_\_\_\_ of shear stress due to viscosity and cross-sectional area of flow.**

- A. Sum
- B. Product
- C. Difference
- D. Ratio

**Answer:** B

**Explanation:** Viscous force = shear stress \*cross sectional area of flow.

**145. Why do we need to do the lining of the canal?**

- A) To minimize seepage losses in canal
  - B) To prevent erosion of bed and sides due to high velocities
  - C) To decrease the discharge in the canal section by increasing the velocity
- A. Only A
  - B. Only A and B
  - C. Only C
  - D. All A, B and C

**Answer:** B

**Explanation:** Lining minimizes seepage loss, prevents erosion of bed and side of canal but increase water evaporation.

**146. A sprinkler irrigation system is suitable when**

- A. the land gradient is steep and the soil is easily erodible
- B. the soil is having low permeability
- C. the water table is low
- D. the crops to be grown have deep roots





## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

Answer: A

**Explanation:** On steep gradients frequent flow irrigation can not be provided, here sprinkler irrigation best suited.

**147. The absolute minimum radius of curve for safe operation, for a speed of 110 kmph is:**

- A. 110 m
- B. 440 m
- C. 220 m
- D. 577

Answer: B

**Explanation:** the compensate gradients is 4 degree for, so the radius will be= $110 \times 4 = 440\text{m}$ .

**148. What is the psychological widening of a pavement on horizontal curve of radius 230 m for ruling speed 80 kmph?**

- A. 0.455m
- B. 0.555m
- C. 0.186 m
- D. 0.136 m

Answer: B

**Explanation:** Psychological widening= $V / (9.5 \times \sqrt{R}) = 0.555\text{m}$

**149. Before entering a manhole a candle is lowered into the manhole**

- A. To illuminate it
- B. To detect toxic gases
- C. To give a signal to the adjacent manhole
- D. To find out the presence of oxygen

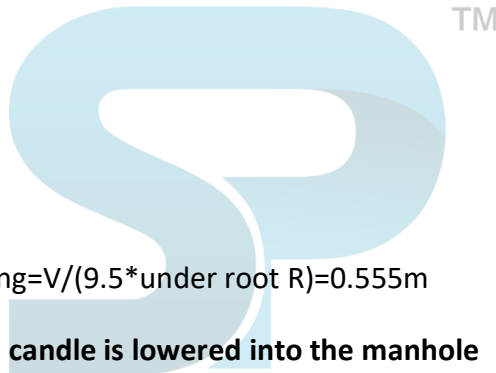
Answer: D

**Explanation:** Candle is lit and inserted into manhole to detect the presence of oxygen.

**150. A fundamental difference between sedimentation tank for water and sewage is**

- A. Sewage sedimentation tanks are bigger
- B. Sewage sedimentation tanks have more depth
- C. Sludge from sewage sedimentation is to be removed more frequently
- D. It can be the final treatment of operation in water treatment

Answer: C

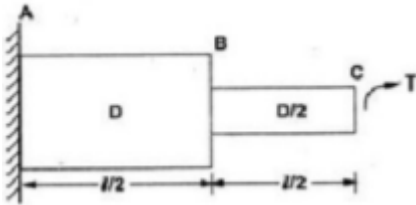




## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

**Explanation:** Sludge from sewage sedimentation is to be removed more frequently

151. A Circular shaft fixed at A has diameter  $D$  for half of its length and diameter  $D/2$  over the other half. What is the rotation of C relative to B if the rotation of B relative to A is 0.1 radians?



- A. 0.4 radians
- B. 0.8 radians
- C. 1.6 radians
- D. 3.2 radians

**Answer:** C

**Explanation:** from torque equation



$$\frac{T}{J} = \frac{\tau}{r} = \frac{G\theta}{l}$$
$$\theta = \frac{T \cdot l}{G \cdot J} \cdot J = \frac{\pi D^4}{32}$$

$$\theta_1 = 0.1 \text{ Radian (given)}$$

$$\theta_1 = \frac{T \times \frac{l}{2}}{G \cdot \frac{\pi D^4}{32}}$$

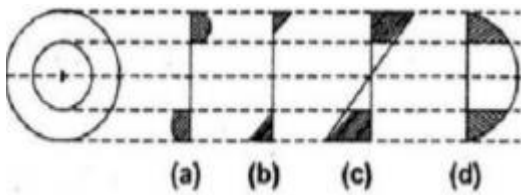
$$\theta_2 = \frac{T \times \frac{l}{2}}{G \times \frac{\pi \left(\frac{D}{2}\right)^4}{32}}$$

$$\frac{\theta_1}{\theta_2} = \frac{D^4}{16 D^4} \Rightarrow \theta_2 = 16 \times \theta_1 = 1.6 \text{ Radian}$$



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

152. a hollow shaft is subjected to torsion. which of the following diagrams shows the shear stress variation in the shaft along its radius?



- A. (a)
- B. (b)
- C. (c)
- D. (d)

Answer: C

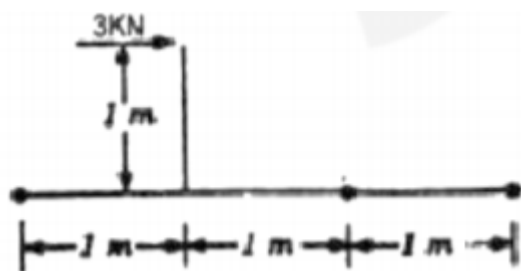
Explanation: In shaft shear stress increases toward periphery and zero at neutral surface.

153. Moment of inertia of a circular section about its diameter 'd' is \_\_\_\_\_.

- A.  $\pi d^3/16$
- B.  $\pi d^4/32$
- C.  $\pi d^3/32$
- D.  $\pi d^4/64$

Answer: D

154. A lever is supported on two hinges at A and C. It carries a force of 3 KN as shown in the figure below. The bending moment B will be :-



- A. 3 KN-m
- B. 2 KN-m
- C. 1 KN-m
- D. None of these

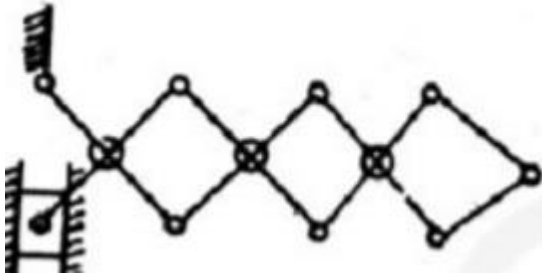
Answer: D



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

**Explanation:** At point B in the given figure there is a hinge support, at hinge there is no bending moment take place.

55. The kinematic chain shown in the figure below is a :-



- A. structure
- B. mechanism with one degree of freedom
- C. mechanism with two degrees of freedom
- D. mechanism with more than two degrees of freedom

**Answer:** B

**Explanation:** It is a mechanism and degree of freedom is one due to only one angular displacement at hinge at rigid support.

156. The centre of gravity of an equilateral triangle, with each side 'a' \_\_\_\_\_ from any of the three sides.

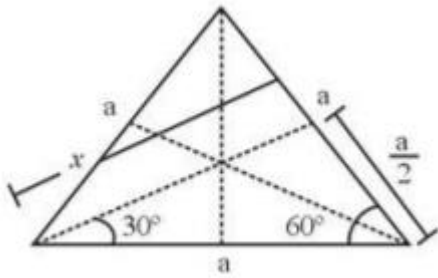
- A.  $\frac{\sqrt{3}a}{2}$
- B.  $\frac{a}{2\sqrt{3}}$
- C.  $2\sqrt{3}a$
- D.  $3\sqrt{3}a$

**Answer:** B

**Explanation:**



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK



$$\tan 30^\circ = \frac{x}{\frac{a}{2}}$$

$$\frac{1}{\sqrt{3}} = \frac{2x}{a}$$

$$x = \frac{a}{2\sqrt{3}}$$

157. The angle of inclination of the plane at which the body begins to move down the plane, is called

- A. Angle of friction
- B. Angle of projection
- C. Angle of repose
- D. None of these

Answer: C

Explanation:

At angle when body just start to begin move in knows as angle of repose at this time limiting friction is less.

158. A body is said to move with Simple Harmonic Motion, if its acceleration is \_\_\_\_\_.

- A. Always directed away from the centre, at the point of reference
- B. Proportional to square of the distance from the point of reference
- C. Proportional to the distance from the point of reference and directed towards it
- D. None of these

Answer: C

Explanation:

The body is in simple harmonic motion, and it will always remain its position proportional to its mean reference point.



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

159. A horizontal beam carrying uniformly distributed load is supported with equal overhangs is shown in the figure below. The resultant bending moment at the mid-span shall be zero if  $(a/b)$  is

- A. 0.75
- B. 0.66
- C. 0.5
- D. 0.33

Answer: C

160. Two persons of equal weights are hanging by their hands from the ends of a rope hung over frictionless pulley. They begin to climb. One person can climb twice the speed of other, who gets to the top first?

- A. Slower climber
- B. Both get there together
- C. Faster climber
- D. Cannot climb at all

Answer: B

Explanation:

Pulley is frictionless and also their weights are same. So force will be same irrespective of their climbing speed. Hence, they reach at same time

161. The phenomenon of slow extension of materials, i.e. increasing with time having no constant load, is called \_\_\_\_\_.

- A. Creeping
- B. Breaking
- C. Yielding
- D. None of these

Answer: C

Explanation:

Creep is the result of continuous load while breaking is the result of impact load, but when yielding starts no load is required.

162. The stress at which extension of a material takes place more quickly as compared to the increase in load, is called as

- A. Elastic point
- B. Plastic point



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

- C. Breaking point
- D. Yielding point

Answer: D

Explanation:

when yielding start no load required.

**163. For quality control of Portland cement, the test essentially done is**

- A. setting time
- B. soundness
- C. tensile strength
- D. All options are correct

Answer: D

Explanation:

All the test required to check the quality control of Portland cement.™

**164. If 1500 g of water is required to have 1875 g cement paste of normal consistency, the percentage of water is \_\_\_\_\_.**

- A. 20%
- B. 25%
- C. 30%
- D. 35%

Answer: B

Explanation:

For normal consistency 0.78P value required so for 1875 g cement and 1500 g water need

**165. Under normal conditions using ordinary cement, the period of removal of the form work, is**

- A. 7 days for beam soffits
- B. 14 days for bottom slabs of spans 4.6 m and more
- C. 21 days for bottom beams over 6 m spans
- D. All options are correct

Answer: D

Explanation:

As per IS 456:2000 removal of form work for Beam soffits = 7days



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

Slab=14 days up to span 4.6 m

Bottom beam =21 days up to 6m span

Bottom beam also known as tie beam it is just above the ground support provide lateral support to foundation.

**166. For given water content, workability decreases if the concrete aggregates contain an excess of**

- A. thin particles
- B. flat particles
- C. elongated particles
- D. All options are correct

Answer: D

Explanation:

Thin flat elongated particle decreases the workability while rounded particle increases the workability of concrete.

**167. For ensuring quality of concrete, use**

- A. single sized aggregates
- B. two sized aggregate
- C. graded aggregates
- D. coarse aggregates

Answer: C

Explanation:

For quality ensuring well graded aggregates required.

**168. According to I.S.: 456, the number of grades of concrete mixes, is \_\_\_\_\_.**

- A. 3
- B. 4
- C. 5
- D. 7

Correct Answer: D

Answer: D

Explanation:

As per IS 456:2000 the grade of concrete is M20 to M50.







## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

**169. The mixture of different ingredients of cement, is burnt at:**

- A. 1000°C
- B. 1200°C
- C. 1400°C
- D. 1600°C

**Answer:** C

**Explanation:**

Temperature range is 1300 to 1500 degree

**170. The risk of segregation is more for:**

- A. wetter mix
- B. larger proportion of maximum size aggregate
- C. coarser grading
- D. All options are correct

**Answer:** D

**Explanation:**

Risk arises with all the case in segregation in concrete.

**171. After casting, an ordinary cement concrete on drying:**

- A. expands
- B. mix
- C. shrinks
- D. None of these.

**Answer:** C

**Explanation:**

Due to formation of tricalcium aluminate concrete start shrink on drying, if water content is more, more shrinkage occurs.

**172. Hydration of cement is due to chemical action of water with:**

- A. Tricalcium silicate and dicalcium silicate
- B. Dicalcium silicate and tricalcium aluminate
- C. Tricalcium aluminate and tricalcium aluminato ferrite
- D. All options are correct

**Answer:** D



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

**Explanation:**

All the complex compound form on addition of water and responsible for the heat of evolution.

**173. To obtain cement dry powder, lime stones and shales or their slurry, is burnt in a rotary kiln at a temperature between**

- A. 1100° and 1200°C
- B. 1200° and 1300°C
- C. 1300° and 1400°C
- D. 1400° and 1500°C

**Answer:** D

**Explanation:** Cement ingredients mix at the temperature of 1300 to 1500 degree.

**174. Permissible compressive strength of M 30 concrete grade (in kg/cm<sup>2</sup>) is**

- A. 100
- B. 150
- C. 200
- D. 300

**Answer:** D

**Explanation:** M30, 30 stands for compressive strength in N/mm<sup>2</sup>

**175. Curing\_\_\_\_\_.**

- A. reduces the shrinkage of concrete
- B. preserves the properties of concrete
- C. prevents the loss of water by evaporation
- D. All options are correct

**Answer:** D

**Explanation:** All the things are related to currying of cement.

**176. The maximum amount of dust which may be permitted in aggregates is**

- A. 5% of the total aggregates for low workability with a coarse grading
- B. 10% of the total aggregates for low workability with a fine grading
- C. 20% of the total aggregates for a mix having high workability with fine grading
- D. All options are correct



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

**Answer:** D

**Explanation:** 5%, 10%, 20% are required for low, medium and high workability cement.

**177. Proper proportioning of concrete, ensures \_\_\_\_\_.**

- A. desired strength and workability
- B. desired durability
- C. water tightness of the structure
- D. All options are correct

**Answer:** D

**Explanation:** Proper proportioning of concrete for strength, durability, workability and water tightness of the structure.

**178. The bulk density of aggregates does not depend upon \_\_\_\_\_.**

- A. size and shape of aggregates
- B. specific gravity of aggregates
- C. grading of aggregates
- D. size and shape of the container

**Answer:** D

**Explanation:** Bulk density not related to size of container.

**179. While compacting the concrete by a mechanical vibrator, the slump should not exceed. \_\_\_\_\_ cm.**

- A. 2.5
- B. 5.0
- C. 7.5
- D. 10

**Answer:** B

**Explanation:** For mechanical vibrator slump limited to 5.0 if it more than then chances of segregation or bleeding takes place.

**180. An aggregate is said to be flaky if its least dimension is less than \_\_\_\_\_.**

- A. 1/5th of mean dimension
- B. 2/5th of mean dimension
- C. 3/5th of mean dimension
- D. 4/5th of mean dimension

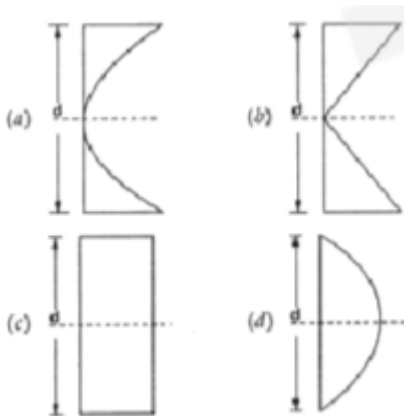


## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

Answer: C

Explanation: For flakyness the dia is 3/5th of mean dia of aggregates

181. Shear stress distribution of a beam of rectangular cross-section, subjected to transverse loading will be:



- A. (a)
- B. (b)
- C. (c)
- D. (d)

Answer: D

182. If the stress in each cross-section of a pillar is just equal to its working stress, its form is called

- A. Form of equal stress
- B. Form of equal strength
- C. Form of equal section
- D. None of these

Answer: B

Explanation: Sol: due to uniform cross section of pillar. Stress in each cross section equals its working stress.

So its form of equal strength

83. The transverse fillet welds are designed for

- A. Tensile strength
- B. Shear strength
- C. Compressive strength
- D. Bending strength



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

Answer: A

184. When a thin cylindrical shell is subjected to an internal pressure, there will be \_\_\_\_\_.

- A. A decrease in diameter and length of the shell
- B. An increase in diameter and decrease in length of the shell
- C. a decrease in diameter and increase in length of the shell
- D. None of these

Answer: D

Explanation: in case of thin cylinder

The diameter & length of cylinder shell does not depend on internal pressure of cylinder

185. The compression members always tend to buckle in the direction of

- A. Axis load
- B. Perpendicular to the axis of load
- C. Minimum cross-section
- D. Least radius of gyration

Correct Answer: D

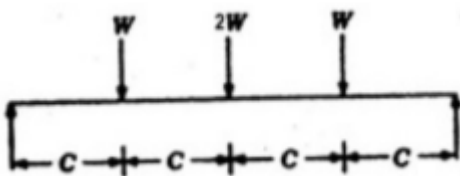
Answer: D

Explanation: When the body tends to buckling column only can fail by buckling (with a certain condition).

$l/r > 97$  (must for long column).

So least  $r$  required. The radius of gyration created.

186. A simply supported beam is loaded as shown in the figure below. The maximum shear force in the beam will be



- A. 0
- B.  $w$
- C.  $2w$
- D.  $4w$

Answer: C



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

**Explanation:**  $R_a + R_b = W + 2w + w$

$$R_a + R_b = 4W$$

&, moment at end support is equal to zero

$$\text{So, } R_a \times 4C = (W \times 3C) + (2W \times 2C) + (W \times C)$$

$$R_a = 2W, R_b = 2W$$

SF is maximum at support so, maximum shear

$$\text{force} = 2w$$

**187. A column with maximum equivalent length has**

- A. Both ends hinged
- B. Both ends fixed
- C. One end is fixed and the other end is hinged
- D. One end fixed and the other end free

**Answer:** C

**Explanation:** maximum equivalent length of column =  $2 \times$  actual length of column in case of one end is fixed and another is free

**188. In case of eccentrically loaded struts \_\_\_\_\_ is preferred.**

- A. Solid section
- B. Hollow section
- C. Composite section
- D. Reinforced section

**Answer:** C

**Explanation:** In case of composite section each section of composite section carries equal load

**189. The design of a structure is**

- A. the planning of the structure
- B. the calculation of straining actions at salient points
- C. deciding the material and proportions of the various members of the structure
- D. None of these

**Answer:** C



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

**Explanation:** A structural system is the combination of structural elements and their materials. It is important to classify a structure by either its form or its function, by recognizing the various elements composing that structure.

**190. In a tensile test, when the material is stressed beyond elastic limit, the tensile strain \_\_\_\_\_ as compared to the stress.**

- A. decreases slowly
- B. increases slowly
- C. decreases more quickly
- D. increases more quickly

**Answer:** D

**191. Factor of safety is defined as the ratio of**

- A. ultimate stress to working stress
- B. working stress to ultimate stress
- C. breaking stress to ultimate stress
- D. ultimate stress to breaking stress

**Answer:** D

**Explanation:** sol: the factor of safety is how much stronger the system is than it usually needs to be for an intended load

**192. In compression test, the fracture in cast iron specimen would**

- A. occur along the axis of load
- B. occur along an oblique plane
- C. occur at right angles to the axis of specimen
- D. not occur

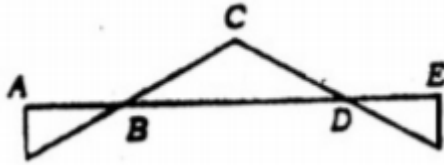
**Answer:** B

**Explanation:** Cast iron is very strong in compression, but weak in shear. When a cast iron specimen is subjected to compression test, the perpendicular cross section bears the direct compressive stress. But a plane inclined at 45 deg to the normal plane has shear stresses due to resolved compression force. Thus this plane is subjected to shear stress. As said earlier, cast iron is weak in shear. So failure occurs along this inclined plane.

**193. Bending moment distribution in a built beam is shown in the figure below. The shear force distribution in the beam is represented by:**



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK



- (A)
- (B)
- (C)
- (D)

Answer: A

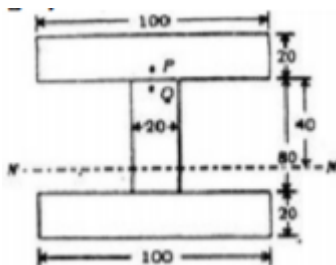
Explanation:  $dm/dx = F$

So,  $F \times (dx) = dm$  (a)

From the above equation (a)

If bending moment is minimum then shear force will be maximum

194. The figure (all dimensions are in mm) below shows an I-section of the beam. The shear stress at point P (very close to the bottom of the flange) is 12 MPa. The stress at point Q in the web (very close to the flange) is:



- A. Indeterminable due to incomplete data
- B. 60 MPa
- C. 18 MPa
- D. 12 MPa





## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

Answer: B

Explanation: by the equation

$$\sigma_1 \cdot a_1 = \sigma_2 \cdot a_2$$

$$12 \times 100 \times 20 = \sigma_2 \times 20 \times 20$$

$$\sigma_2 = 60$$

**195. The maximum frictional force, which comes into play, when a body just begins to slide over the surface of the other body, is known as**

- A. Static friction
- B. Limiting friction
- C. Dynamic friction
- D. Coefficient of friction

Answer: B

Explanation: The maximum friction that can be generated between two static surfaces in contact with each other. Once a force applied to the two surfaces exceeds the limiting friction, motion will occur. For two dry surfaces, the limiting friction is a product of the normal reaction force and the coefficient of limiting friction.

**196. A column of length 'L' with both ends fixed may be considered as equivalent to a column of length \_\_\_\_\_ with both ends hinged.**

- A. L/8
- B. L/2
- C. L/4
- D. L

Answer: B

Explanation: for both ends fixed, Equivalent length of column =  $\frac{1}{2}$  (actual length of column) & for both end hinged Equivalent length of column is equal to the actual length of column

**197. According to Euler's column theory, the crippling load for a column of length (l) fixed at both ends is \_\_\_\_\_ the crippling load for a similar column**

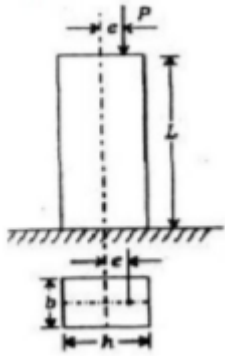
- A. equal to
- B. 4 times
- C. 2 times
- D. 8 times

Answer: B



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

198. A short column of symmetric cross section made of a brittle material is subjected to an eccentric vertical load 'P' at an eccentricity 'e'. To avoid tensile stress in the short column, the eccentricity 'e' should be less than or equal to:



- A.  $h/12$
- B.  $h/6$
- C.  $h/3$
- D.  $h/2$

Correct Answer: B

Solution

To avoid tensile stress,

$$\sigma_{\min} \geq 0$$

$$\frac{F_v}{h \times 1} \left[ 1 - \frac{6e}{h} \right] \geq 0$$

$$\left[ 1 - \frac{6e}{h} \right] \geq 0$$

$$\frac{6e}{h} \leq 1$$

$$e \leq \frac{h}{6}$$



199. A beam is structural member predominantly subjected to

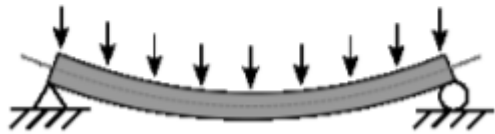
- A. transverse loads
- B. axial forces
- C. twisting moment
- D. None of these

Answer: A



## SSC JUNIOR ENGINEERING CIVIL MODEL PAPER 1 | EBOOK

**Explanation:** A beam is a structural element that primarily resists loads applied laterally to the beam's axis. Its mode of deflection is primarily by bending. The loads applied to the beam result in reaction forces at the beam's support points.



**200. A truss is completely analyzed, when**

- A. the direct stresses in all the members are found
- B. all the external reactions components are determined
- C. the equilibrium is satisfied
- D. None of these

**Answer:** A





## Stay Connected With SPNotifier



**[SSC JE Roles and Responsibilities](#)**

**[SSC JE Salary and Perks](#)**

**[SSC JE Career Growth](#)**

**[SSC JE Document Verification](#)**