

SSC-JE 2022
GENERAL AWARENESS & REASONING
PRELIMINARY EXAMINATION

GENERAL AWARENESS & REASONING
PREVIOUS YEARS OBJECTIVE
DETAILED SOLUTION
2004-2020



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First Edition : 2019

Second Edition : 2020

Third Edition : 2021

PREFACE

There are so many variables to this Paper of SSC-JE that it becomes a nightmare situation for students to figure out any pattern, which they can work upon. Facts, reasoning, fundamentals, analytics, chronology, current, all come raining from various directions from subjects like History, Geography, Arithmetic, Economy, Polity, Culture, Life Sciences, General Knowledge, etc. But when the content is treated the way it is tested at SSC-JE, it dispels the darkness, and ushers in the light that leads you to the right direction.

IES Master '**SSC-JE General Awareness and Reasoning**' book is all about the right content arrived after distilling years of SSC-JE question papers from the past. Patient and persistent, as you read through the lines, phrases, and paragraphs, provided in the explanation to each and every question, your fear vanishes, giving you the handle to steer your preparation.

In doing so, you organize your knowledge, and you customize your preparation. With this clarity into the framework of SSC-JE, the revised and updated edition of this book, having **58 sets of Previous Years Questions and Detailed Solutions**, promises to help you appreciate the techniques and processes deployed by the Selection Commission, and helps you prepare in line with the desired level of exam.

Using smart learning techniques, IES Master Research & Development team has crafted a jewel in its effort to integrate and map the desired knowledge that is in synch with the exam trend. Right content keeps you motivated and helps you unlock your full potential whereby you draw upon a spirit that can withstand the pressure cooker like situation of the exam hall.

Having realized the self in shaping up to the competition, SSC-JE exam becomes just another exam.

IES Master Publication
New Delhi

EXAM PATTERN

PAPERS	MODE OF EXAMINATION	SUBJECT	NUMBER OF QUESTIONS	MAXIMUM MARKS	DURATION & TIMINGS
Paper-I Objective Type	Computer Base Mode	(i) General Intelligence & Reasoning	50	50	2 Hours
		(ii) General Awareness	50	50	Morning Shift
		(iii) General Engineering	100	100	Evening Shift
Paper-II Conventional Type	Written Examination	General Engineering (Civil and Structural / Mechanical / Electrical)		300	2 Hours

SYLLABUS

PAPER-I

General Awareness

Questions will be aimed at testing the candidate's general awareness of the environment around him/her and its application to society. Questions will also be designed to test knowledge of current events and of such matters of everyday observations and experience in their scientific aspect as may be expected of any educated person. The test will also include questions relating to India and its neighbouring countries especially pertaining to History, Culture, Geography, Economic Scene, General Polity and Scientific Research, etc. These questions will be such that they do not require a special study of any discipline.

General Intelligence & Reasoning

The Syllabus for General Intelligence would include questions of both verbal and non-verbal type. The test may include questions on analogies, similarities, differences, space visualization, problem solving, analysis, judgement, decision making, visual memory, discrimination, observation, relationship concepts, arithmetical reasoning, verbal and figure classification, arithmetical number series etc. The test will also include questions designed to test the candidate's abilities to deal with abstract ideas and symbols and their relationships, arithmetical computations and other analytical functions.

General Engineering

Civil and Structural / Mechanical / Electrical

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2020

24 Mar. 2021
(Evening Session)

GENERAL AWARENESS

- With reference to computers and the internet, which of the following viruses makes changes to disk's file system ?
(a) Macro virus (b) Cluster virus
(c) Stealth virus (d) Polymorphic virus
 - Operation 'Smiling Buddha' is associated with :
(a) India's first cloned baby
(b) India's first nuclear test
(c) India's first GM crop
(d) India's first HYV seed
 - The rim of the Pacific is also called ring of _____.
(a) Hail (b) Storm
(c) Fire (d) Stream
 - Which of the following wildlife sanctuaries is located in Goa ?
(a) Interview Island Wildlife Sanctuary
(b) Bhagwan Mahavir wildlife Sanctuary
(c) Chinnar Wildlife Sanctuary
(d) Dandeli Wildlife Sanctuary
 - The mass of an electron is nearly one upon _____ times that of a proton.
(a) 3000 (b) 1000
(c) 2000 (d) 1500
 - The number of protons in a Lithium nucleus is :
(a) four (b) one
(c) two (d) three
 - _____ is caused by severe protein deficiency.
(a) Rickets (b) Kwashiorkor
(c) Xerophthalmia (d) Goitre
 - An _____ is an investment made by a firm or individual in one country into business interests located in another country.
(a) CRR (b) Forex
(c) SEZ (d) FDI
 - 'Shaheen-IX' a joint air exercise was held in 2020 between :
(a) Pakistan and China
(b) India and Pakistan
(c) China and India
(d) India and Afghanistan
 - In which state is Ranthambore National park located ?
(a) Rajasthan
(b) Maharashtra
(c) Madhya Pradesh
(d) Uttar Pradesh
 - The Chilahati-Haldibari rail link between India and _____ was reopened after gap of 55 years in December 2020.
(a) Bangladesh (b) Myanmar
(c) Nepal (d) Bhutan
 - In which of the following state/union territories was the world's longest highway tunnel opened in October 2020 ?
(a) Sikkim
(b) Arunachal Pradesh
(c) Himachal Pradesh
(d) Jammu and Kashmir
 - Who among the following have been jointly named Time's Person of the year 2020 ?
(a) Greta Thunberg and Malala Yousafzai
(b) Joe Biden and Kamala Harris
(c) Joe Biden and Donald Trump
(d) Joe Biden and Greta Thunberg
-

14. Which of the following is NOT an electrical insulator ?
 (a) Diamond (b) Rubber
 (c) Gold (d) Glass
15. Given below are four hill stations in India.
 (P) Munnar (Q) Coorg
 (R) Mount Abu (S) Dalhousie
 Which of the following presents the correct order of their locations from South to North ?
 (a) PQRS (b) QPSR
 (c) QRPS (d) QSPR
16. Which of the following instruments is used for detecting current in an electric circuit ?
 (a) Calorimeter (b) Sonometer
 (c) Galvanometer (d) Manometer
17. Which team became the champion at the 2018 Asian Games Women's football ?
 (a) Malaysia (b) South Korea
 (c) Japan (d) Thailand
18. In 2020, Poulomi Ghatak announced her retirement from :
 (a) cricket (b) table tennis
 (c) football (d) basketball
19. Which is the only active volcano in India ?
 (a) Barren Island
 (b) Narcondam Island
 (c) Deccan Traps
 (d) Baratang Island
20. Pennar river originates in the state of _____.
 (a) Tamil Nadu (b) Kerala
 (c) Karnataka (d) Andhra Pradesh
21. In 1919, Gandhiji gave a call for Satyagraha against which Act that was passed by the British?
 (a) The English Education Act
 (b) Calico Act
 (c) The Arms Act
 (d) Rowlatt Act
22. Which food components has the highest gross calorific value ?
 (a) Carbohydrates (b) Fats
 (c) Vitamins (d) Proteins
23. In December 2020, which of the following State Government gave permission to hold the popular bull taming sport Jallikattu with certain restrictions?
 (a) Kerala
 (b) Karnataka
 (c) Andhra Pradesh
 (d) Tamil Nadu
24. Who among the following was honoured with the 'Global visionary of Sustainable Business and Peace' award during the launch of the Federation of India-Israel Chamber of Commerce's international chapter in Dubai on 21 December 2020 ?
 (a) Azim Premji
 (b) NR Narayana Murthy
 (c) Mukesh Ambani
 (d) Ratan Tata
25. Which of the following cities is NOT one of the four cities from India selected by the World Economic Forum in November 2020 for pioneering a new global policy roadmap for the small cities developed by the G20 Global Smart Cities Alliance ?
 (a) Indore (b) Chandigarh
 (c) Hyderabad (d) Faridabad
26. 'Mind Master : Winning Lessons from a Champion's Life' is the autobiography of :
 (a) Pentala Harikrishna
 (b) Vishwanathan Anand
 (c) Magnus Carlsen
 (d) Koneru Humpy
27. The _____ volume of the 'Akbar Nama' is known as Ain-i-Akbari.

ANSWER KEY

1. (b)	11. (a)	21. (d)	31. (b)	41. (c)
2. (b)	12. (c)	22. (b)	32. (c)	42. (d)
3. (c)	13. (b)	23. (d)	33. (b)	43. (a)
4. (b)	14. (c)	24. (d)	34. (b)	44. (b)
5. (c)	15. (a)	25. (b)	35. (b)	45. (b)
6. (d)	16. (c)	26. (b)	36. (b)	46. (a)
7. (b)	17. (c)	27. (a)	37. (b)	47. (b)
8. (d)	18. (b)	28. (c)	38. (d)	48. (a)
9. (a)	19. (a)	29. (c)	39. (a)	49. (a)
10. (a)	20. (c)	30. (d)	40. (b)	50. (b)

EXPLANATIONS

Sol-1: (b)

- Cluster viruses make changes to a disk file system. Any program run from an infected disk causes the virus to run, giving the impression that the virus infects all programs on the disk.
- A macro virus is a computer virus written in the same macro language that is used for software applications, such as word processing programs.
- A stealth virus is a hidden computer virus that attacks operating system processes and averts typical anti-virus or anti-malware scans.
- A polymorphic virus is a complicated computer virus that affects data types and functions. It is a self-encrypted virus designed to avoid detection by a scanner.

Sol-2: (b)

Smiling Buddha was the assigned code name of India's first successful nuclear bomb test on 18 May 1974. The bomb was detonated on the army

base Pokhran Test Range, in Rajasthan, by the Indian Army under the supervision of several key Indian generals.

Sol-3: (c)

Rim of Pacific is also called **Ring of Fire**. The Ring of Fire, also referred to as the Circum-Pacific Belt, is a path along the Pacific Ocean characterized by active volcanoes and frequent earthquakes. The majority of Earth's volcanoes and earthquakes take place along the Ring of Fire.

Sol-4: (b)

- **Bhagwan Mahavir Wildlife Sanctuary** is situated in the Sanguem district of **Goa**. It covers a total area of 240 square kilometers, out of which 170 square kilometers is dedicated to the Mollem National Park built at the core of the sanctuary.
- **Interview Island Sanctuary** is the largest island sanctuary in the **Andaman and Nicobar** Islands. It is situated southwest of North Andaman and is separated by c. 20 km of sea from Mayabunder, a township in North Andaman.

- **Chinnar Wildlife Sanctuary** is located 18 km north of Marayoor on State Highway 17 in the Marayoor and Kanthalloor panchayats of Devikulam taluk in the Idukki district of **Kerala state** in South India. It is one of 18 wildlife sanctuaries among the protected areas of Kerala.
- **Dandeli Wildlife Sanctuary** is located in Uttara Kannada District of **Karnataka state** in India. Karnataka state government has officially notified the Dandeli Elephant Reserve under Project Elephant in 2015.

Sol-5: (c)

- An electron is a tiny particle with a mass of 9.108×10^{-28} g and a negative charge.
- The mass of a proton is 1.6726×10^{-24} g or about 1836 (nearly 2000) times the mass of an electron. The proton carries a positive electrical charge, that is equal in magnitude to the charge of the electron but opposite in sign.
- Mass of a neutron is 1.675×10^{-24} g. It is very close to that of the proton. A neutron carries no charge.

Sol-6: (d)

- Lithium is an alkali metal with the atomic number of 3 and an atomic mass of 6.941 g/mol. This means that lithium has **3 protons, 3 electrons and 4 neutrons**.
- Being an alkali metal, lithium is a soft, flammable, and highly reactive metal that tends to form hydroxides.
- It also has a low density and under standard conditions, it is the least dense solid element.

Sol-7: (b)

- **Kwashiorkor** is a severe form of malnutrition caused by deficiency of dietary protein.
- **Rickets** is a disorder that becomes apparent during infancy due to deficiency of vitamin D in the body.
- **Xerophthalmia** is a progressive eye disease caused by vitamin A deficiency.
- **Goiter** is caused due to deficiency of Iodine

Sol-8: (d)

- A foreign direct investment (**FDI**) is an investment made by a firm or individual in one country into business interests located in another country. Generally, **FDI** takes place when an investor establishes foreign business operations or acquires foreign business assets in a foreign company.
- Cash Reserve Ratio (CRR) is the share of a bank's total deposit that is mandated by the Reserve Bank of India (RBI) to be maintained with the latter in the form of liquid cash.
- The foreign exchange (**Forex**) is a global decentralized or over-the-counter market for the trading of currencies. This market determines foreign exchange rates for every currency. It includes all aspects of buying, selling and exchanging currencies at current or determined prices.
- A special economic zone is an area in which the business and trade laws are different from the rest of the country. SEZs are located within a country's national borders, and their aims include increased trade balance, employment, increased investment, job creation and effective administration.

Sol-9: (a)

Shaheen-IX or Eagle-IX exercise, is an exercise between the **Pakistan Air Force** and the **People's Liberation Army Air Force, China**.

Sol-10: (a)

Ranthambore National Park is one of the biggest and most renowned national parks in India. The park is located in the Sawai Madhopur district of **Rajasthan**.

Sol-11: (a)

- The restored 3.5km Haldibari – Chilahati cross-border rail link between **India** and **Bangladesh**.
- The Chilahati-Haldibari railway link was cut off during the India-Pakistan war in 1965 to disrupt the connectivity.

2020

24 Mar. 2021
(Evening Session)

GENERAL INTELLIGENCE AND REASONING

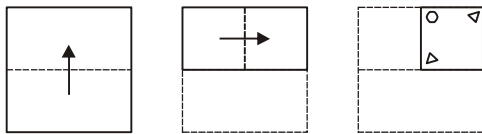
1. Which two signs should be interchanged to make the given equation correct ?

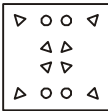
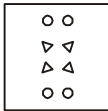
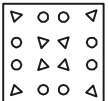
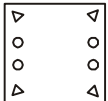
$$5 \times 132 \div 11 - 28 + 70 = 18$$

- (a) \div and \times (b) $-$ and \times
(c) $+$ and $-$ (d) $+$ and \times
2. Some female athletes are sitting in three rows and the distance between each rows is 5m. Everyone faces north, as Damini is in the middle row, Komali is on Damini's 24 m right, but in the same rows, Neerja is just behind Komali, while Girija is to the north of Damini. What is the minimum distance between Neerja and Girija ?

- (a) 25 m (b) 24 m
(c) 26 m (d) 20 m

3. A paper is folded and cut as shown below. How will it appear when unfolded ?



- (a)  (b) 
- (c)  (d) 

4. Select the number from among the given options that can replace the question mark (?) in the following series.

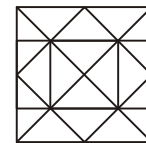
74, 101, 133, 175, 273 ?

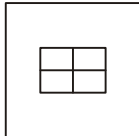
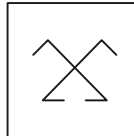
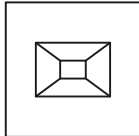
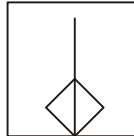
- (a) 415 (b) 453
(c) 339 (d) 317
5. Select the option that is correct for the bracketed letters with respect to their inclusion in the given series.

U, G, R, L, (P), Q, L, V, I, A, F, (G)

- (a) Both the bracketed letters are incorrect.
(b) The first bracketed letter is correct and the second bracketed letter is incorrect.
(c) Both the bracketed letters are correct.
(d) The first bracketed letter is incorrect and the second bracketed letter is correct.

6. Select the option that is embedded in the given figure. (rotation is NOT allowed).



- (a)  (b) 
- (c)  (d) 

7. Vinesh went 45m east from his office and then turn left and walked 28m. He then turned left and walked 25m, after that he turned right and walked 32m, in the end, he took left and walked 20m. How far is he from his office?

- (a) 52m (b) 53m
(c) 45m (d) 60m

8. In a class of 140 students, 16 students do not participate in any of the two activities, i.e. Quiz and Extempore. 70 students participate in Quiz and 77 students participate in Extempore. How many students participate in both Quiz and Extempore ?

- (a) 23 (b) 32
(c) 20 (d) 29

9. Select the option that is related to the third term in the same way as the second term is related to the first term.

STRANGER : MZIZMTYX :: RESTRAIN : ?

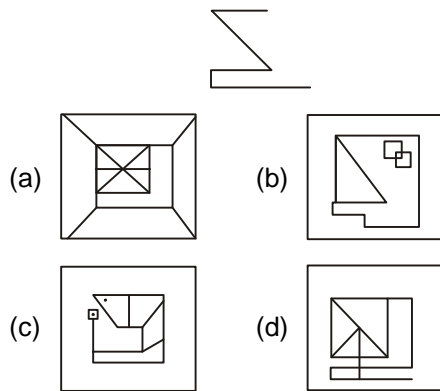
- (a) LKHGIZCT (b) KKHGIZBT
(c) LLHGIZBT (d) LKIGHZCT

10. Select the letter from among the given options that can replace the question mark (?) in the following series.

J, L, O, S, ?, D

- (a) B (b) U
(c) X (d) Z

11. Select the option in which the given figure is embedded (rotation is NOT allowed).



12. Select the correct option that indicates the arrangement of the given words in a logical and meaningful order.

1. Dog 2. Buffalo
3. Rabbit 4. Lizard
5. Lion

- (a) 4, 3, 1, 5, 2
(b) 4, 1, 3, 5, 2
(c) 2, 5, 3, 1, 4
(d) 2, 3, 5, 1, 4

13. Three statements are given, followed by four conclusions numbered I, II, III, IV. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow from the statements.

Statements:

1. All students are experts
2. Some experts are tutors.

3. All tutors are Indians.

Conclusions:

- I. Some Indians are experts.
II. Some Indians are students.
III. No Indian is a student.
IV. All tutors are experts.
(a) Only conclusions I, II and IV follow
(b) All the conclusions follow
(c) Only conclusions IV, and either II or III follow
(d) Only conclusions I, and either II or III follow

14. Select the correct combination of mathematical signs to sequentially replace the * signs and to balance the given equation.

$$18 * 12 * 4 * 5 * 6 = 53$$

- (a) x, +, ÷, - (b) x, -, ÷, +
(c) +, -, x, ÷ (d) x, ÷, +, -

15. Select the correct option that indicates the arrangement of the given words in a logical and meaningful order.

1. Chandigarh 2. Rock Garden
3. Asia 4. India
5. World

- (a) 3, 5, 4, 1, 2 (b) 2, 3, 4, 1, 5
(c) 5, 3, 4, 2, 1 (d) 5, 3, 4, 1, 2

16. Two Statements are given followed by Two conclusions numbered I and II. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements :

1. Some tractors are cars.
2. All cars are autos.

Conclusions:

- I. All autos are cars.
II. All tractors are autos
(a) Only conclusion I follows

ANSWER KEY

1. (c)	11. (a)	21. (a)	31. (c)	41. (a)
2. (c)	12. (a)	22. (b)	32. (d)	42. (b)
3. (a)	13. (d)	23. (b)	33. (c)	43. (c)
4. (c)	14. (d)	24. (d)	34. (c)	44. (b)
5. (a)	15. (d)	25. (c)	35. (c)	45. (d)
6. (b)	16. (d)	26. (c)	36. (a)	46. (a)
7. (d)	17. (b)	27. (a)	37. (d)	47. (a)
8. (a)	18. (d)	28. (b)	38. (c)	48. (b)
9. (a)	19. (a)	29. (c)	39. (b)	49. (b)
10. (c)	20. (c)	30. (b)	40. (b)	50. (c)

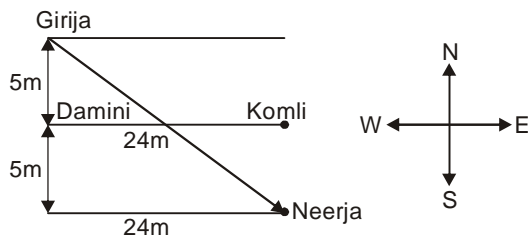
EXPLANATIONS

Sol-1: (c)

By interchanging '+' and '-' sign.

$$5 \times 132 \div 11 + 28 - 70 = 18$$

Sol-2: (c)



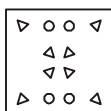
So, distance between Neerja and Girija.

$$= \sqrt{24^2 + 10^2}$$

$$= \sqrt{676} = 26 \text{ m}$$

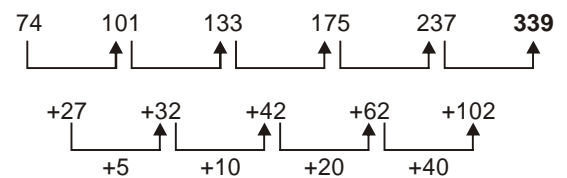
Sol-3: (a)

When the paper was unfolded.

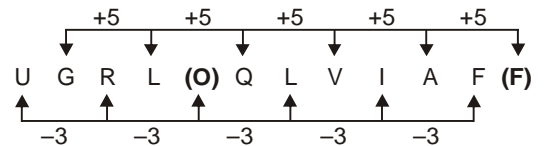


Sol-4: (c)

Pattern is,

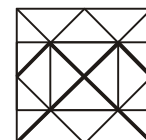


Sol-5: (a)

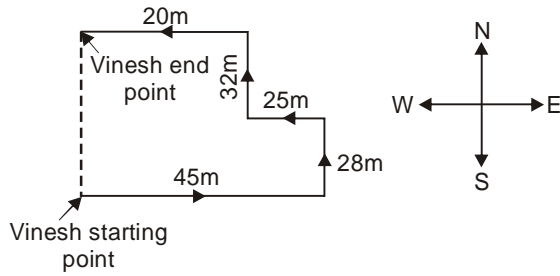


In place of (P) 'O' should be comes and in place of (G) 'F' should be comes. so, both the bracketed letters are in correct.

Sol-6: (b)



Sol-7: (d)



So, Vinesh ($28 + 32 = 60$ m) from his office.

Sol-8: (a)

$P(Q) = 70$

$P(E) = 77$

So, $P(Q \cup E) = 140 - 16 = 124$

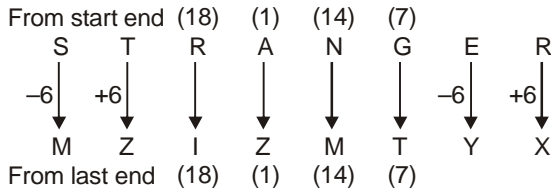
$\Rightarrow P(Q \cup E) = P(Q) + P(E) - P(Q \cap E)$

$124 = 70 + 77 - P(Q \cap E)$

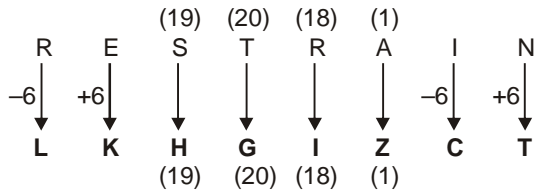
$\Rightarrow P(Q \cap E) = 147 - 124 = 23$

Sol-9: (a)

Pattern is,

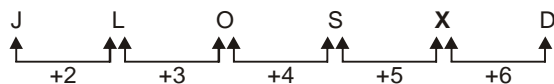


So in the same way

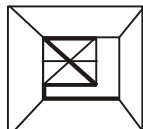


Sol-10: (c)

Pattern is,

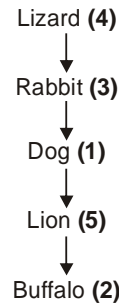


Sol-11: (a)



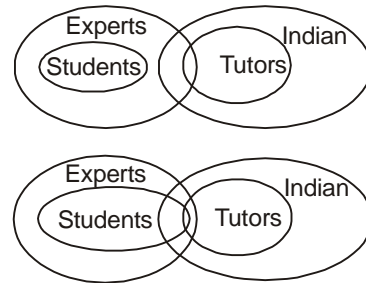
Sol-12: (a)

Words are arranged according to their size



Sol-13: (d)

Possibilities are,

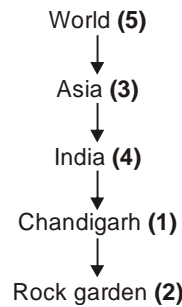


So, it is clear from above only conclusion I, and either II or III follow.

Sol-14: (d)

$18 \times 12 \div 4 + 5 - 6 = 53$

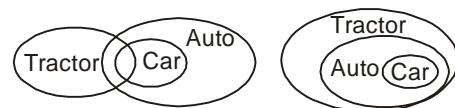
Sol-15: (d)



Rock garden is in Chandigarh.

Sol-16: (d)

Possibilities are



So, it is clear from above neither conclusion I nor II follows.