

UGC NET Dec 2020 and June 2021 27th December Morning Shift

1.) Study the given table carefully and answer the questions that follow

The following table presents the details about the number of Assistant Software Engineers (ASE), Junior Software Engineers (JSE) and Senior Software Engineers (SSE) employed in five different Software companies (A-E) during the year 2020. Based on the data in the table, answer the question 1-5:

Company-wise Number of Software Engineers

Software company	Software Engineers (SE)		
	Assistant (ASE)	Junior (JSE)	Senior (SSE)
A	150	100	150
B	350	100	200
C	200	150	350
D	250	250	450
E	150	250	350

If the number of all the Software Engineers in the Company-A, Company-C and Company-D is increased by 30%, 35%, and 40% respectively, then what will be the overall percentage increase in the number of all Software Engineers in all the five companies taken together?

- (A) ~18%
- (B) ~22%
- (C) ~30%
- (D) ~35%

2.) Study the given table carefully and answer the questions that follow

The following table presents the details about the number of Assistant Software Engineers (ASE), Junior Software Engineers (JSE) and Senior Software Engineers (SSE) employed in five different Software companies (A-E) during the year 2020. Based on the data in the table, answer the question 1-5:

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E	150	250	350

What is the average number of Junior Software Engineer (JSEs) in all the five Companies?

- (A) 150
- (B) 110
- (C) 170
- (D) 190

3.) Study the given table carefully and answer the questions that follow

The following table presents the details about the number of Assistant Software Engineers (ASE), Junior Software Engineers (JSE) and Senior Software Engineers (SSE) employed in five different Software companies (A-E) during the year 2020. Based on the data in the table, answer the question 1-5:

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D	250	250	450
E	150	250	350

If the number of ASEs employed in all the five companies is increased by 20% and the number of SSEs employed in all the five companies is decreased by 20%, then what percent will the number of ASEs be more than that of SSEs?

- (A) 18%
- (B) 20%
- (C) 10%
- (D) 15%

4.) Study the given table carefully and answer the questions that follow

The following table presents the details about the number of Assistant Software Engineers (ASE), Junior Software Engineers (JSE) and Senior Software Engineers (SSE) employed in five different Software companies (A-E) during the year 2020. Based on the data in the table, answer the question 1-5:

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D	250	250	450
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What is the ratio between the number of ASEs in Company-A and Company-C?

- (A) 5:6
- (B) 3:4
- (C) 5:7
- (D) 2:3

5.) Study the given table carefully and answer the questions that follow

The following table presents the details about the number of Assistant Software Engineers (ASE), Junior Software Engineers (JSE) and Senior Software Engineers (SSE) employed in five different Software companies (A-E) during the year 2020. Based on the data in the table, answer the question 1-5:

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What is the difference between the average number of JSEs and average number of ASEs taking all the five companies together?

- (A) 10
- (B) 50
- (C) 30
- (D) 40

6.) What is the full form of MODEM?

- (A) Modulator- Demodulator
- (B) Modern Electronic Microwave
- (C) Mechanism of Disk Enhancing Memory
- (D) Mobile Data Extranet Multicore

7.) The first MOOC offered in 2008 by Stephen Downes and George Siemens was

- (A) Connectivism and Connective knowledge
- (B) Introduction to Artificial intelligence
- (C) Models of Teaching
- (D) Rhizomatic Learning

8.) Given below are two statements

Statement I: Entity theorists tend to explain failure in terms of a lack of an ability.

Statement II: Incremental theorists tend to explain failure in terms of lack of effort.

In light of the above statements, choose the most appropriate answer from the options given below

- (A) Both Statement I and Statement II are correct
- (B) Both Statement I and Statement II are incorrect
- (C) Statement I is correct but Statement II is incorrect
- (D) Statement I is incorrect but Statement II is correct

9.) Some of the largest and the most successful digital libraries are

- A. Project Gutenberg
- B. Microsoft Teams
- C. ibiblio
- D. Internet Archive
- E. Sakai LMS

Choose the correct answer from the options given below:

- (A) A, B and C only
- (B) A, B and E only

- (C) A, C and D only
- (D) B, D and E only

10.) Match List I with List II

List I (Behavioral Model)

- A. Mastery learning
- B. Direct Instruction
- C. Simulation
- D. Social learning

List II (Developer)

- I. Albert Bandura
- II. Tom Good
- III. Benjamin Bloom
- IV. Carl Smith

Choose the correct answer from the options given below:

- (A) A -III , B -II , C -IV , D -I
- (B) A -II , B -IV , C -I , D -III
- (C) A -IV , B -I , C -III , D -II
- (D) A -I , B -III , C -II , D -IV

11.) Which among the following is a secondary source of data?

- (A) Archival data
- (B) Participants' diary
- (C) National Sample Survey Organization data
- (D) Oral narratives

12.) Given below are two statements

Statement I: Random sampling may not be a practical strategy in case of a rare kind of population

Statement II: Stratified random sample is better as compared to simple random sample if population is too heterogenous

In light of the above statements, choose the most appropriate answer from the options given below

- (A) Both Statement I and Statement II are correct
- (B) Both Statement I and Statement II are incorrect
- (C) Statement I is correct but Statement II is incorrect
- (D) Statement I is incorrect but Statement II is correct

13.) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R
Assertion A : In experimental research, the effect of independent variable is examined on the dependent variable.

Reason R : Causal relation between two variables can be established only by the experimental method.

In light of the above statements, choose the correct answer from the options given below

- (A) Both A and R are true and R is the correct explanation of A
- (B) Both A and R are true but R is NOT the correct explanation of A
- (C) A is true but R is false
- (D) A is false but R is true

14.) According to Kerlinger (1973), good research problem should be

- A. Describing the relationship between two or more variables
- B. Articulated intelligently
- C. Philosophically oriented
- D. In the form of a question
- E. Amenable to empirical testing

Choose the correct answer from the options given below:

- (A) A, B and E only
- (B) A, D and E only
- (C) B, C and E only
- (D) B, D and E only

15.) Match List I with List II

List I

- A. Positivism
- B. Hypothesis
- C. Reliability
- D. Norm

List II

- I. Average score
- II. Consistency of the score
- III. Tentative answer to the problem
- IV. Epistemological position

Choose the correct answer from the options given below:

- (A) A -III , B -II , C -IV , D -I
- (B) A -III , B -IV , C -I , D -II
- (C) A -IV , B -III , C -II , D -I
- (D) A -IV , B -I , C -III , D -II

16.) In communication, connotative words have

- (A) Literal meaning
- (B) Cultural meaning
- (C) Common meaning
- (D) Clear meaning

17.) In communication, a major barrier to reception of a message is

- (A) Attitude of listeners
- (B) Knowledge of listeners
- (C) Education of listeners
- (D) Income of listeners

18.) A notice about the auction of a car in a newspaper is an example of

- (A) Group Communication
- (B) Downward Communication
- (C) Interpersonal Communication
- (D) Mass Communication

19.) The emergence of consumers who can control and even create media of their own and of producers who can easily track consumer responses, is made possible by

- (A) Television
- (B) Radio
- (C) Internet
- (D) Telephone

20.) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R
Assertion A: Teachers should strive to avoid discussing complex issues.

Reason R: Classroom communication should facilitate a movement from exploring simple issues to complex issues.

In light of the above statements, choose the correct answer from the options given below

- (A) Both A and R are true and R is the correct explanation of A
- (B) Both A and R are true but R is NOT the correct explanation of A
- (C) A is true but R is false
- (D) A is false but R is true

21.) What comes next in the following sequence?

2Z, 4X, 7V, 11T, ?

- (A) 15P
- (B) 16R
- (C) 16S
- (D) 15Q

22.) Given below are two statements

Statement I: ₹ 10000 will become ₹ 13310 at 20% per annum, compounded half-yearly in 1.5 years.

Statement II: A 800m long train is running at the speed of 78 km/h. If it crosses a tunnel in 1 minute, the length of the tunnel is 1300m.

In light of the above statements, choose the correct answer from the options given below

- (A) Both Statement I and Statement II are true
- (B) Both Statement I and Statement II are false
- (C) Statement I is true but Statement II is false
- (D) Statement I is false but Statement II is true

23.) A tank is normally filled in 6 hours but it takes 4 hours longer to fill because of a leak in its bottom.
If the tank is full, the leak will empty it in

- (A) 24 hours
- (B) 15 hours
- (C) 12 hours
- (D) 10 hours

24.) Rambabu ranks eighteenth in a class of 45 students. His rank from the last is

- (A) 27
- (B) 28
- (C) 29
- (D) 30

25.) Consider following statements:

- A. An employee's salary was reduced by 50%. Again, the reduced salary was increased by 50%. Now, his initial and final salaries are same.
- B. 64% is equivalent to 16/25.
- C. If an article is sold at 200% profit, then the ratio of cost price to its selling price is 1:2.

Which of the above statement(s) is/are correct?

- (A) A and B only
- (B) B only
- (C) A and C only
- (D) B and C only

26.) Identify the fallacy committed in the argument: "Since you are yourself a meat eater, you have no right to object to my hunting animals for sport".

- (A) Argument from Ignorance
- (B) Argument ad Hominem
- (C) Argument ad Populum
- (D) Argument to Pity

27.) In which of the following steps of inference in the Nyāya syllogism all the three terms stand synthesized?

- (A) Udāharāṇa (example)
- (B) Upanaya (application)
- (C) Hetu (reason)
- (D) Nigmana (conclusion)

28.) Given below are two statements

Statement I: An inference is called kevalānvayi when it is based on a middle term, which is only positively related to the major term.

Statement II: In kevalānvayi, the knowledge of vyāpti between the middle and major terms is arrived at only through the method of agreement in presence.

In light of the above statements, choose the most appropriate answer from the options given below

- (A) Both Statement I and Statement II are correct
- (B) Both Statement I and Statement II are incorrect
- (C) Statement I is correct but Statement II is incorrect
- (D) Statement I is incorrect but Statement II is correct

29.) Which one of the following would be the logical equivalent of "Only citizens can vote"?

- (A) All those who are not citizens too shall vote
- (B) All those who are citizens shall vote
- (C) All those who can vote are citizens
- (D) None but voters are not citizens

30.) Consider the following statements in a square of opposition of propositions and pick the correct answer.

- (A) 'A' being given as True; 'O' is False
- (B) 'E' being given as False; 'I' is False

- (C) 'I' being given as True; 'E' is True
- (D) 'A' be given as False; 'E' is True

31.) Which one of the following electronic technologies is the key technology for making the first generation computers?

- (A) Transistor
- (B) Integrated circuit
- (C) Vacuum Tube
- (D) Dual-Core CPU

32.) Arrange the following events that influenced the development of the Internet in reverse chronological order (that is, from most recent to oldest):

- A. ARPA established
 - B. TCP/IP implemented in ARPANET
 - C. Sputnik I Launched
 - D. WWW Created at CERN
 - E. DNS implemented
- Choose the correct answer from the options given below
- (A) D, E, B, A, C
 - (B) C, D, B, E, A
 - (C) A, B, C, E, D
 - (D) B, A, C, E, D

33.) Which of the following statement about computer memory are true?

- A. Secondary storage is non-volatile storage.
 - B. Video memory found in graphics cards is volatile memory.
 - C. Primary memory (RAM) is the fastest form of memory in a computer.
- Choose the correct answer from the options given below:
- (A) A and B only
 - (B) B and C only
 - (C) A and C only
 - (D) A, B and C

34.) Match List I with List II

List I

Memory Device

- A. Main Memory
- B. Cache Memory
- C. Hard Disk
- D. CD ROM

List II

Memory Type

- I. Magnetic Memory
- II. Dynamic Random Access Memory
- III. Optical Memory
- IV. Static Random Access Memory

Choose the correct answer from the options given below:

- (A) A -II , B -IV , C -III , D -I
- (B) A -I , B -II , C -IV , D -III
- (C) A -II , B -IV , C -I , D -III
- (D) A -IV , B -II , C -I , D -III

35.) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R
Assertion A: The Internet of Things (IOT) is a rapidly evolving technology capable of transforming numerous areas of our lives.

Reason R: There are no issues of security, compatibility and data privacy associated with IOT.

In light of the above statements, choose the correct answer from the options given below

- (A) Both A and R are true and R is the correct explanation of A
- (B) Both A and R are true but R is NOT the correct explanation of A
- (C) A is true but R is false
- (D) A is false but R is true

36.) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R

Assertion A: Chromium and Iron contamination is found in wastewater of some industries

Reason R: Higher dose of Chromium and Iron can cause toxic effects in our body.

In light of the above statements, choose the most appropriate answer from the options given below

- (A) Both A and R are correct and R is the correct explanation of A
- (B) Both A and R are correct but R is NOT the correct explanation of A
- (C) A is correct but R is not correct
- (D) A is not correct but R is correct

37.) 'Blue baby syndrome' in infants is mainly caused by presence of

- (A) Sulphate in water
- (B) Nitrate in water
- (C) Fluoride in water
- (D) Arsenic in water

38.) Climate changes involve factors, both internal and external. External ones include

- A. Feedback between the atmosphere, ocean and land surface
- B. Solar variability
- C. Earth's orbit alteration
- D. Variability within the climate system
- E. Volcanic activity

Choose the correct answer from the options given below:

- (A) A, B and C only
- (B) B, C and E only
- (C) C, D and E only
- (D) A, B and E only

39.) Identify the correct sequence of the following noise pollution indices in decreasing order of their magnitude in an urban area

- A. L_{10}

B. L_{90}

C. L_{eq}

Choose the correct answer from the options given below

(A) A, C, B

(B) A, B, C

(C) B, A, C

(D) B, C, A

40.) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R
Assertion A: As a rule of thumb, sites of average wind speed 8 m/s or above can be considered very good for electricity generation from wind turbines.

Reason R: For average wind speed < 8 m/s, the power produced is not very significant.

In light of the above statements, choose the correct answer from the options given below

(A) Both A and R are true and R is the correct explanation of A

(B) Both A and R are true but R is NOT the correct explanation of A

(C) A is true but R is false

(D) A is false but R is true

41.) The aim of vocationalisation of Education is

(A) Making education job oriented

(B) Preparing students for a vocation along with regular general education

(C) Emphasising on vocational education than on regular general education

(D) Gradually, converting general education to vocational education

42.) After the implementation of National Education Policy (2020), which of the following types of institutions will exist?

A. Deemed to be University

B. Teaching University

C. Affiliating Technical University

D. Research University

E. Autonomous degree granting colleges

Choose the correct answer from the options given below:

(A) A, B, D and E only

(B) B, C, D and E only

(C) B, D and E only

(D) C, D and E only

43.) Given below are two statements

Statement I: Establishment of four big Engineering colleges in the East, West, South and North of the country was recommended by N. R. Sarkar Committee.

Statement II: The All India Council for Technical Education was set up in November, 1950.

In light of the above statements, choose the correct answer from the options given below

(A) Both Statement I and Statement II are true

(B) Both Statement I and Statement II are false

(C) Statement I is true but Statement II is false

(D) Statement I is false but Statement II is true

44.) Which of the following statements are true vis-a-vis NEP-2020?

- A. 4 year integrated B.Ed will be a dual major holistic. Bachelor's degree which will be the minimal degree qualification for school teachers
- B. All stand alone Teacher Education Institutions will be required to convert to multidisciplinary institutions by 2025.
- C. A two year B.Ed course for students having Bachelor's degree in a specialized subject.
- D. Admission test to pre-service teacher preparation programs shall be conducted by the NCERT
- E. A one year B.Ed course for students with 4-year undergraduate degree in a specialised subject will be the pre-requisite for being a school teacher.

Choose the correct answer from the options given below:

- (A) A, B and C only
- (B) A, C and E only
- (C) B, C and D only
- (D) B, D and E only

45.) Match List I with List II

List I (ARTICLE)

- A. Article 29 (1)
- B. Article 19 (1)(A)
- C. Article 239
- D. Article 21 (A)

List II (SUBJECT)

- I. Right to information
- II. Equality of opportunity in educational institutions
- III. Free and compulsory education to all the children of age 6-14 years
- IV. Education in Union Territories comes under the responsibility of the Central government

Choose the correct answer from the options given below:

- (A) A -II , B -I , C -IV , D -III
- (B) A -II , B -IV , C -I , D -III
- (C) A -IV , B -III , C -II , D -I
- (D) A -III , B -I , C -IV , D -II

46.) Read the given passage and answer the questions that follow (46-50)

After all, the race of men has only just started. From the point of view of evolution, human beings are very young children indeed, babies, in fact, of a few months old. Scientists reckon that there has been life of some sort on the earth in the form of jelly-fish and that kind of creatures for about twelve hundred million years; but there have been men for only one million years, and there have been civilized men for about eight thousand years, at the outside. These figures are difficult to grasp; so let us scale them down. Suppose that we reckon the whole past of living creatures on the earth as one hundred years; then the whole past of man works out at about one month, and during that month there have been civilization for between seven and eight hours. So you see there has been little time to learn in, but there will be oceans of time in which to learn better. Taking man's civilized past at about seven or eight hours, we may estimate his future, that is to say, the whole period between now and when the sun grows too cold to maintain life any longer on the earth, at about one hundred thousand years. Thus, mankind is only at the beginning of its civilized life, and as I say, we must not expect too much. The past of man has been on the

whole, a pretty beastly business, a business of fighting and bullying. We must not expect even civilized peoples not to have done these things. All we can ask is they will sometimes have done something else. This is what the story of mankind has on the whole been like. Even our own age has fought the two wars in history, in which millions of people were killed or mutilated. And while today, it is true that people do not fight and kill each other in the streets.

The Scale which the author uses for representing time is:

- (A) One month = One million years
- (B) One hundred years = Eight thousand years
- (C) One year = One million years
- (D) One month = Twelve hundred million years

47.) Read the given passage and answer the questions that follow (46-50)

After all, the race of men has only just started. From the point of view of evolution, human beings are very young children indeed, babies, in fact, of a few months old. Scientists reckon that there has been life of some sort on the earth in the form of jelly-fish and that kind of creatures for about twelve hundred million years; but there have been men for only one million years, and there have been civilized men for about eight thousand years, at the outside. These figures are difficult to grasp; so let us scale them down. Suppose that we reckon the whole past of living creatures on the earth as one hundred years; then the whole past of man works out at about one month, and during that month there have been civilization for between seven and eight hours. So you see there has been little time to learn in, but there will be oceans of time in which to learn better. Taking man's civilized past at about seven or eight hours, we may estimate his future, that is to say, the whole period between now and when the sun grows too cold to maintain life any longer on the earth, at about one hundred thousand years. Thus, mankind is only at the beginning of its civilized life, and as I say, we must not expect too much. The past of man has been on the whole, a pretty beastly business, a business of fighting and bullying. We must not expect even civilized peoples not to have done these things. All we can ask is they will sometimes have done something else. This is what the story of mankind has on the whole been like. Even our own age has fought the two wars in history, in which millions of people were killed or mutilated. And while today, it is true that people do not fight and kill each other in the streets.

"We must not expect even civilized peoples not to have done these things". This observation suggests that:

- (A) Civilized people have never done any fighting and bullying
- (B) Civilized people have also engaged in fighting and bullying
- (C) There is nothing wrong in fighting and bullying
- (D) Those who fight are uncivilized

48.) Read the given passage and answer the questions that follow (46-50)

After all, the race of men has only just started. From the point of view of evolution, human beings are very young children indeed, babies, in fact, of a few months old. Scientists reckon that there has been life of some sort on the earth in the form of jelly-fish and that kind of creatures for about twelve hundred million years; but there have been men for only one million years, and there have been civilized men for about eight thousand years, at the outside. These figures are difficult to grasp; so let us scale them down. Suppose that we reckon the whole past of living creatures on the earth as one hundred years; then the whole past of man works out at about one month, and during that month there have been civilization for between seven and eight hours. So you see there has been little time to learn in, but there will be oceans

of time in which to learn better. Taking man's civilized past at about seven or eight hours, we may estimate his future, that is to say, the whole period between now and when the sun grows too cold to maintain life any longer on the earth, at about one hundred thousand years. Thus, mankind is only at the beginning of its civilized life, and as I say, we must not expect too much. The past of man has been on the whole, a pretty beastly business, a business of fighting and bullying. We must not expect even civilized peoples not to have done these things. All we can ask is they will sometimes have done something else. This is what the story of mankind has on the whole been like. Even our own age has fought the two wars in history, in which millions of people were killed or mutilated. And while today, it is true that people do not fight and kill each other in the streets.

If one compares the existence of jelly-fish and man on earth, the man is:

- (A) Almost of the same age as jelly-fish
- (B) Contemporary of jelly-fish
- (C) Very young to jelly-fish
- (D) Older than the jelly-fish

49.) Read the given passage and answer the questions that follow (46-50)

After all, the race of men has only just started. From the point of view of evolution, human beings are very young children indeed, babies, in fact, of a few months old. Scientists reckon that there has been life of some sort on the earth in the form of jelly-fish and that kind of creatures for about twelve hundred million years; but there have been men for only one million years, and there have been civilized men for about eight thousand years, at the outside. These figures are difficult to grasp; so let us scale them down. Suppose that we reckon the whole past of living creatures on the earth as one hundred years; then the whole past of man works out at about one month, and during that month there have been civilization for between seven and eight hours. So you see there has been little time to learn in, but there will be oceans of time in which to learn better. Taking man's civilized past at about seven or eight hours, we may estimate his future, that is to say, the whole period between now and when the sun grows too cold to maintain life any longer on the earth, at about one hundred thousand years. Thus, mankind is only at the beginning of its civilized life, and as I say, we must not expect too much. The past of man has been on the whole, a pretty beastly business, a business of fighting and bullying. We must not expect even civilized peoples not to have done these things. All we can ask is they will sometimes have done something else. This is what the story of mankind has on the whole been like. Even our own age has fought the two wars in history, in which millions of people were killed or mutilated. And while today, it is true that people do not fight and kill each other in the streets.

From the point of view of the evolution, "human beings are very young children indeed." The author says this, in order to show that:

- (A) Very young children are not civilized
- (B) Evolution does not help civilized forward
- (C) Human beings have learnt very little in a very long time
- (D) Human beings are still at the beginning of their life on this earth

50.) Read the given passage and answer the questions that follow (46-50)

After all, the race of men has only just started. From the point of view of evolution, human beings are very young children indeed, babies, in fact, of a few months old. Scientists reckon that there has been life of some sort on the earth in the form of jelly-fish and that kind of creatures for about twelve hundred

million years; but there have been men for only one million years, and there have been civilized men for about eight thousand years, at the outside. These figures are difficult to grasp; so let us scale them down. Suppose that we reckon the whole past of living creatures on the earth as one hundred years; then the whole past of man works out at about one month, and during that month there have been civilization for between seven and eight hours. So you see there has been little time to learn in, but there will be oceans of time in which to learn better. Taking man's civilized past at about seven or eight hours, we may estimate his future, that is to say, the whole period between now and when the sun grows too cold to maintain life any longer on the earth, at about one hundred thousand years. Thus, mankind is only at the beginning of its civilized life, and as I say, we must not expect too much. The past of man has been on the whole, a pretty beastly business, a business of fighting and bullying. We must not expect even civilized peoples not to have done these things. All we can ask is they will sometimes have done something else. This is what the story of mankind has on the whole been like. Even our own age has fought the two wars in history, in which millions of people were killed or mutilated. And while today, it is true that people do not fight and kill each other in the streets.

Why does the author say that there has been little time for man to learn?

- (A) Man has to be busy in earning
- (B) Man has been busy in battles
- (C) Civilization process has just begun
- (D) Belief in the availability of plenty of time