

Scholastic Aptitude Test, 2014 EC, natural science, entrance exam, round 1

Grade 12 · Aptitude · 2014 E.C.

Time allowed: 120 minutes

Questions: 44

Total marks: 44

Name _____ Grade _____ ID No. _____ Date _____

1. APPARENT (1)

A. Masked	B. Evident
C. Perceptible	D. Obvious

2. BLEAK (1)

A. Gloomy	B. Bright
C. Chilly	D. Dismal

3. CONVERT (1)

A. Transform	B. Transmute
C. Change	D. Persist

4. CONVENIENT (1)

A. Suited	B. Handy
C. Comfortable	D. Unsuitable

5. DISASTER (1)

A. Mishap	B. Calamity
C. Prosperity	D. Misfortune

6. DISDAIN (1)

A. Like	B. Approve
C. Despise	D. Detest

7. DEPRIVE (1)

A. Despoil	B. Dispossess
C. Direst	D. Restore

8. PRINCIPLE: DOCTRINE (1)

A. Myopic: Farsighted	B. Experience: Knowledge
C. Living: Dead	D. Climb: Ascent

9. EXERCISE: MANEUVER (1)

A. Implement: Propose	B. Prepare: Criticize
C. Alphabetical: Sequential	D. Tacit: Superior

10. MONARCH: KING (1)

A. Lion: Charismatic	B. Donkey: Load
C. Cobra: Venom	D. Butterfly: Insect

-
- 11. CONSTITUTION: LAW** (1)
- | | |
|-----------------------------|----------------------------------|
| A. Lawyer: Supervise | B. Judge: Advice |
| C. Government: Rule | D. Parliament: Administer |
-
- 12.** All planets revolve around the sun. Earth is a planet and revolves around the sun. DIV revolves around the sun. Therefore DIV (1)
- | | |
|---|---|
| A. could be a planet. | B. is likely to be a man made satellite. |
| C. does not appear to be a planet. | D. is unlikely to be a planet. |
-
- 13.** Find the two statements that together prove that " Abeba has black hair." Abeba has long hair. Almaz has black hair. Almaz is ten years old. Abeba's hair is the same color as Almaz's. Almaz has short hair (1)
- | | |
|---------------------|---------------------|
| A. 1 & 5 | B. 2 & 3 |
| C. 1 & 2 | D. 2 & 4 |
-
- 14.** Any meat contains a lot of protein. Any protein can cause uric acid. Abebe eats a lot of meat. We can say that (1)
- | |
|--|
| A. Abebe does not need to have medical checkup for uric acid. |
| B. Uric acid does not cause serious illness. |
| C. Abebe suffers from uric acid related illness |
| D. Abebe is likely to have uric acid related illness. |
-
- 15.** Find the two statements that together prove: "Helen is a country music singer." Helen sings in a band. Helen likes country music the best. Difficult music such as country and classical require a strongly trained voice. Helen's band plays country songs. Helen has attended singing lessons for many years. (1)
- | | |
|---------------------|---------------------|
| A. 3 & 5 | B. 1 & 4 |
| C. 1 & 3 | D. 2 & 5 |
-
- 16.** Five planes leave the airport at the same time. Plane B arrives at the destination before planes A & D, but after plane C. Plane E arrives before plane D but after plane A. Which plane is the last to arrive at the destination? (1)
- | | |
|-------------------|-------------------|
| A. plane C | B. plane D |
| C. plane A | D. plane B |
-
- 17.** Assume that: All JUNS are TIFS Some UMIS are HUNS All DAES are HUNS All TIES are DAES Which of the following is correct? (1)
- | | |
|-----------------------------|-----------------------------|
| A. All HUNS are HYNS | B. All JUNS are HYNS |
| C. All DAES are HUNS | D. All JUNS are DAES |
-
- 18.** All wild animals contribute to the wellbeing of the ecosystem of our planet. All wild animals are endangered. Carnivorous animals are more endangered. A lion is a carnivorous animal and symbolizes charisma and courage. People love to see it. A lion someday would disappear from the Earth. Therefore (1)
- | |
|--|
| A. life is the survival of the fittest and this works for wild animals too; |
| B. wild animals cause harm and we do not need to worry about them. |
| C. we should particularly take care of lions. |
| D. we should protect all wild animals with emphasis on endangered animals. |

19. The black rhinoceros lives on the plains of Africa. It has very poor eyesight and a very bad temper! The black rhino is powerful and can be dangerous. It is a very endangered animal. Hunters kill it for its valuable horns. It can be said that (1)

A. The black rhino could be dangerous to people.

B. It is not relevant to talk about wild animals while people are killing each other.

C. Human beings are endangered animals.

D. Wild animals are created to serve the interests of man.

20. According to the passage (1)

A. Governments are committed to keep warming below 1.5°C.

B. Some people have already started to suffer from climate change

C. The effect of climate change is not felt now.

D. The effect of climate change will be serious by 2030.

21. According to paragraph one, which of the following is not directly related to climate change? (1)

A. Fuel energy

B. Protracted droughts

C. Displacement of people

D. Deteriorating health conditions

22. According to the passage, which of the following contributes to climate change? (1)

A. Solar energy

B. Wind energy

C. Coal energy

D. hydroelectric energy

23. Fossil fuel production must decline by roughly 6 per cent per year between 2020 and 2030' means (1)

A. It is not possible to fully avoid fuel energy by 2030

B. Climate change is caused by natural processes.

C. The world has to completely depend on renewable energy

D. It is not possible to keep warming below 1.5°C.

24. The man's _____ driving resulted in a death of a young man. (1)

A. exceptional

B. negligent

C. burdensome

D. charismatic

25. Many young Ethiopian soldiers lost their lives and are _____ of their country. (1)

A. nonconformists

B. heroes

C. reactionaries

D. compatriots

26. If a constitution of a country is not implemented; it is _____ (1)

A. existential

B. bountiful

C. nominal

D. judgmental

27. Searching frantically to find the hidden jewels, the thieves proceeded to _____ the entire house. (1)

A. amplify

B. ransack

C. justify

D. darken

28. It is said that there is no _____ in the absence of a criminal law (1)

A. bribe

B. crime

C. raping

D. theft

29. On one Sunday 2400 male and female students attended a certain event. The ratio of male to female was 3 to 5. How many females attended the event? (1)
- A. 1400
B. 1500
C. 800
D. 900
-
30. If $2x+3y=7$ and $3x-5y=1$, what is the value of $3x-3y$? (1)
- A. 2
B. 1
C. 4
D. 3
-
31. Consider the system of linear inequalities $4x-3y \leq 12$ and $x+2y > 6$. Which one of the following belongs to the solution set of the given system of linear inequalities? (1)
- A. (1, 4)
B. (1, 1)
C. (0,1)
D. (0,3)
-
32. If $f(x) = 2x-6$ and $g(x) = x^3 + x^2 - 12x$, which one of the following is equal to $(x^2 + 4x)f(x) - 2g(x)$? (1)
- A. 0
B. 48
C. -24
D. 24
-
33. A carpenter wants to buy two types of nails, the first type costs 200 birr per kilogram and the second type costs 350 birr per kilogram. He needs at least 5 kilograms of the first type and at least 7 kilograms of the second type. The carpenter can spend at most 5000 birr. If x represents the amount of the first type of nail and y represents the second type of nail, which of the following system of linear inequalities represents the situation? (1)
- A. $x + y \geq 12$ $200x + 350y \geq 5000$
B. $x + y \leq 12$ $200x + 350y \geq 5000$
C. $x + y \geq 12$ $200x + 350y \leq 5000$
D. $x + y \leq 12$ $200x + 350y \leq 5000$
-
34. A certain restaurant sells sandwich for 65 birr and soft-drink for 20 birr. On a certain day the restaurant collected 28360 birr after selling 300 sandwiches and a certain amount of soft-drinks. How many soft-drinks were sold on that day? (1)
- A. 400
B. 393
C. 443
D. 450
-
35. In a certain store, there was coffee from three different places; 35% of the total was from Jimma, 50% of the total from Harar, and 15% of the total from Sidama. If all the coffee from Harar is sold and no other coffee is added or sold, what percentage of the remaining coffee will be the coffee from Sidama? (1)
- A. 40%
B. 50%
C. 20%
D. 30%
-
36. The first term of a sequence is -2 and every term after the first term is -3 times the preceding term. How many of the first 60 terms are less than 1? (1)
- A. 30
B. 20
C. 50
D. 40
-
37. If the 6th term of an arithmetic sequence is 18 and the 21st term of the sequence is 78, what is the 10th term of the sequence? (1)
- A. 34
B. 40
C. 36
D. 38

38. What is the quotient when the polynomial $x^3 + 512$ is divided by $x + 8$? (1)

A. $x^2 + 64$ B. $x^2 - 8x + 64$
C. $x^2 + 8x + 64$ D. $x^2 - 64$

39. What is the value of x in the sequence 1, 2, 5, 10, 17, 26, x ? (1)

A. 39 B. 35
C. 41 D. 37

40. Sixty more than nine times a number is equal to two less than ten times the number. What is the number? (1)

A. 60 B. 58
C. 62 D. 64

41. In September 2000, Ahmed was more than eleven times as old as his son Mustafa and in September 2009, Ahmed was seven more than three times as old as Mustafa. How old was Mustafa in September 2000? (1)

A. 7 years old B. 9 years old
C. 12 years old D. 3 years old

42. A jar has 100 marbles of the same size. 25 of the marbles are white, 15 of the marbles are blue and the rest of the marbles are red. If a marble is picked at random, what is the probability that the picked marble is red? (1)

A. $\frac{2}{3}$ B. $\frac{3}{5}$
C. $\frac{1}{4}$ D. $\frac{2}{5}$

43. A bag contains three different flavored candies of the same size. 10 of the candies are orange flavored, 25 of the candies are apple flavored and 30% of the total is mango flavored. If a candy is picked at random, what is the probability that the picked candy is apple flavored? (1)

A. $\frac{1}{2}$ B. $\frac{3}{10}$
C. $\frac{1}{3}$ D. $\frac{2}{5}$

44. The height(h) in meters of an object thrown upwards as a function of time(t) is given by $h(t) = -16t^2 + 96t + 112$. What is the maximum height that the object can reach? (1)

A. 400 m B. 288 m
C. 144 m D. 256 m

— END OF EXAMINATION —