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OSSTET 2019 PAPER – I

Question Booklet No.

18372

SET : D

Time : 2 Hours 30 Minutes

Full Marks : 150

Roll No. (in figures) : *181104048*

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Centre Name : *HARI HARA HIGH SCHOOL, ASKA*

Centre Code : *1104*

PL... ...TRUCTIONS PRINTED ON THE ...S BOOKLET

The candidates are required to answer all the Sections in the OMR Answer Sheets.

This Booklet is to be taken away by the candidates after examination is over and handed over the OMR Sheet to the invigilator(s) concerned.

SEAL

Section	Subject	No. of Questions	Full Marks
A : Section – I	Odia(Compulsory for all streams)	1 – 20 = 20	20
A : Section – II	English(Compulsory for all streams)	21 – 40 = 20	20
B : Section – III	Optional (any one group / subject to be chosen) Arts : Odia + English + History & Political Science + Geography & Economics	41 – 100 = 60	60
	Science(PCM) : Physics + Chemistry + Mathematics	41 – 100 = 60	60
	Science(CBZ) : Chemistry + Botany + Zoology	41 – 100 = 60	60
	Classical Sanskrit	41 – 100 = 60	60
	Classical Urdu	41 – 100 = 60	60
	Classical Telugu	41 – 100 = 60	60
	Hindi	41 – 100 = 60	60
C : Section – IV	Compulsory for all streams Child Development, Pedagogy, School Management & Evaluation	101 – 150 = 50	50

JP – 1D/100

(Turn over)

A – SECTION – I
ODIA (COMPULSORY)

ନିମ୍ନ ପ୍ରଦତ୍ତ ଅନୁଚ୍ଛେଦଟି ପାଠକରି ପ୍ରଶ୍ନ (ନଂ **1** ରୁ **5** ପର୍ଯ୍ୟନ୍ତ) ଗୁଡ଼ିକର ଉତ୍ତର ବାଛ :

ପ୍ରତି ନୂତନ ଯୁଗ ମଣିଷପାଇଁ ନୂଆ ସତ୍ୟ, ଜୀବନର ନୂଆ ରୂପ, ନୂଆ ଅର୍ଥ, ନୂଆ ଯନ୍ତଣାର ସମ୍ଭାବନା ନେଇ ଆସେ । ମଣିଷକୁ ଗୁଲେଞ୍ଚ କରି ଆସେ । ତା'ର ଆହ୍ବାନକୁ କର୍ଣ୍ଣପାତ ନ କରି ଆମେ ଅତୀତର ଜୀବନ୍ୟାସପାଇଁ ତନ୍ତ୍ରସାଧନା କରୁଛୁ । ପ୍ରତି ନୂତନ ଯୁଗରେ ମଣିଷ ଅନେକ ରାଜ୍ୟ ହରାଏ, ପୁଣି ଅନେକ ନୂଆ ରାଜ୍ୟ ଜିଣିନିଏ । ମାତ୍ର ଯେଉଁ ସ୍ମୃତିମାନଙ୍କ ଉପରେ ଆଧୁନିକ ସମାଜ ପ୍ରତିଷ୍ଠିତ, ଯେଉଁ ସେନାପତିଙ୍କ ସାହାଯ୍ୟରେ ଆମେ ନୂତନ ରାଜ୍ୟ ଜିଣନ୍ତୁ, ସେମାନଙ୍କୁ ଆମେ କେଉଁ ଦୃଷ୍ଟିରେ ଦେଖୁ ? ଗୋଟିଏ ଗଣତାନ୍ତ୍ରିକ ସମାଜରେ ସାହିତ୍ୟର ସାମାଜିକ ଦାୟିତ୍ୱ ଅନସ୍ୱୀକାର୍ଯ୍ୟ । ପାଠ୍ୟ-ପୁସ୍ତକ ଜାତୀୟକରଣ ପରେ ପ୍ରାଇଭେଟ୍ ସିଲାବସ୍‌ରୁ ବାହାରି ପଦାକୁ ଆସି ପାରି ନ ଥିବା ଆମ ସାହିତ୍ୟ ମଲାଣି କି ବଞ୍ଚିଛି ତଦନ୍ତ କରିବାପାଇଁ ଏକ କମିସନ ବସିବା ଦରକାର ପଡୁଛି । ପ୍ରକୃତିର ଅତ୍ୟାଗୁରୁ

ଲୋକଙ୍କୁ ରକ୍ଷା କରିବାର ବିଜ୍ଞାନ ଅଭ୍ୟୁଦୟର ଗୋଟିଏ କାରଣ । ବିଜ୍ଞାନର ଅଭ୍ୟୁଦୟ ଓ ଗଣତନ୍ତ୍ର ବିକାଶ ସମୃଦ୍ଧଯୁକ୍ତ ବୋଲି ପ୍ରମାଣ କରିବା ହୁଏ ତ କଷ୍ଟକର । ବିଜ୍ଞାନ ପ୍ରତି ଆମର ଦୃଷ୍ଟିକୋଣ ହେଲା ଗୋଟିଏ ଅଛବ ପରି ବିଜ୍ଞାନ ଆମପାଇଁ ମୂଲଲାଗୁ । ଦେଶ ଦରିଦ୍ର ହେଲା, ଲୋକସଂଖ୍ୟାଗୁଡ଼ାଏ ବଢ଼ିଲା ବୋଲି ଉତ୍ପାଦନ ବଢ଼ାଇବାକୁ ଏ ଅଣଆଧ୍ୟାତ୍ମିକ ବିଜ୍ଞାନର ସାହାଯ୍ୟ ନେବାକୁ ପଡ଼ିଲା ସିନା ! ବିଜ୍ଞାନ ଆମର ସାମାଜିକ ଜୀବନକୁ କଳୁଷିତ କରୁଛି, ସଂସ୍କୃତି ନଷ୍ଟ କରୁଛି । ତଥାପି ତାକୁ ଯେତେବେଲେ ଛାଡ଼ି ହେଉନି, ଆମର ଆଶା ଧର୍ମକର୍ମ ଟିକିଏ ବଢ଼େଇଦେଲେ, ବିଜ୍ଞାନ ଦ୍ବାରା ଘଟୁଥିବା କ୍ଷତିପରୂରଣ ହୋଇଯିବ ।

1. ନୂତନ ଯୁଗ ଆସିବା ଦ୍ବାରା କ'ଣ ହୁଏ ?

    (A) ମଣିଷ ନୂତନ ଯୁଗକୁ ଗୁଲେଞ୍ଚ କରେ

    (B) ପୁରାତନ ବଦଲି ଯାଏ

    (C) ଜୀବନ ଉନ୍ନତ ହୁଏ

    (D) ମଣିଷ ଯନ୍ତଣା ଭୋଗେ

2. କାହାକୁ ଆମର ତନ୍ତ୍ରସାଧନା ବୋଲି କୁହାଯାଇଛି ?

(A) ଧର୍ମଭାବ ବୃଦ୍ଧିପାଇଁ ଆମର ପ୍ରଚେଷ୍ଟାକୁ

(B) ବିଜ୍ଞାନ ଉପରେ ଥିବା ଆମର ଆସ୍ଥାକୁ

(C) ଆମର ପାରମ୍ପରିକ ମନୋବୃତ୍ତିକୁ

(D) ଆମର ସିଦ୍ଧିପ୍ରାପ୍ତି ଆଶାକୁ

3. ଆମ ସାହିତ୍ୟର ଅବସ୍ଥା କିପରି ?

(A) ଆମର ସାହିତ୍ୟ କେବଳ ପାଠ୍ୟକ୍ରମ ମଧ୍ୟରେ ଆବଦ୍ଧ ହୋଇ ରହିଛି

(B) ଆମ ସାହିତ୍ୟର ମୃତ୍ୟୁ ଘଟିଛି

(C) ଆମ ସାହିତ୍ୟର ଉନ୍ନତି ସାଧିତ ହୋଇଛି

(D) ଆମ ସାହିତ୍ୟ ସାମାଜିକ ଦାୟିତ୍ୱ ନିର୍ବାହ କରୁଛି

4. ଆମେ ବିଜ୍ଞାନକୁ କେଉଁ ଦୃଷ୍ଟିରେ ଦେଖୁ ?

(A) ଧର୍ମଦ୍ରୋହୀ ଭାବରେ

(B) ପ୍ରଗତିର ହେତୁ ରୂପେ

(C) ସମସ୍ତ ଉନ୍ନତିର ମାଧ୍ୟମ ଭାବେ

(D) ସେବକ ରୂପେ

5. କ'ଣ କରାଗଲେ ବିଜ୍ଞାନ ଦ୍ୱାରା ହେଉଥିବା କ୍ଷତିପୂରଣ ହୋଇପାରିବ ବୋଲି ଆମେ ଆଶା କରୁ ?

(A) ଦାରିଦ୍ର୍ୟ ଦୂରକରିବା ଦ୍ୱାରା

(B) ଲୋକସଂଖ୍ୟା ନିୟନ୍ତ୍ରଣ ଦ୍ୱାରା

(C) ଅଧିକ ଧର୍ମପରାୟଣ ହେବା ଦ୍ୱାରା

(D) ଉତ୍ପାଦନ ବଢ଼ାଇବା ଦ୍ୱାରା

6. 'କଥା ପକାଇବା' ରୂଢ଼ିଟି କେଉଁ ଅର୍ଥରେ ପ୍ରଚଳିତ ?

(A) ନିଷ୍ପତ୍ତି କରିବା

(B) ଗୁପ୍ତକଥା ପ୍ରଘଟ କରିବା

(C) ବାଧା ଦେବା

(D) ପ୍ରସ୍ତାବ ଦେବା

7. ଦର୍ଦୁର-ରବ ଶୁଣି ନୀରବ ପିକ ମୂଢ଼-ସଭାରେ ମୂକ ଯଥା ଧାର୍ମିକ ।

— ଏଥିରେ କେଉଁ ଅଳଙ୍କାର ରହିଛି ?

(A) ଉପମା

(B) ଶ୍ଳେଷ

(C) ଉତ୍ପ୍ରେକ୍ଷା

(D) ବ୍ୟତିରେକ

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8. 'ଅର୍ଥକୁ ଅତିକ୍ରମ ନ କରି' — ସମସ୍ତ ପଦ କ'ଣ ହେବ ?

(A) ଯଥାର୍ଥ

(B) ଅଯଥାର୍ଥ

(C) ଅନର୍ଥ

(D) ବ୍ୟର୍ଥ

9. ମାସମାନଙ୍କରେ ମାର୍ଗଶିର ଶ୍ରେଷ୍ଠ ।

— ରେଖାଙ୍କିତ ପଦଟି କେଉଁ ବିଭକ୍ତି ?

(A) ପ୍ରଥମା

(B) ତୃତୀୟା

(C) ଷଷ୍ଠୀ

(D) ସପ୍ତମୀ

10. 'ଘୋଡ଼ା ମୁହାଁ' — ଏହା କେଉଁ ସମାସ ନିଷ୍ପନ୍ନ ପଦ ?

(A) ତତ୍‌ପୁରୁଷ

(B) କର୍ମଧାରୟ

(C) ବହୁବ୍ରୀହି

(D) ଦ୍ୱିଗୁ

11. ନିମ୍ନ ପ୍ରଦତ୍ତ ଶବ୍ଦ ମଧ୍ୟରୁ କେଉଁଟି 'ଆ' ପ୍ରତ୍ୟୟଯୁକ୍ତ ?

(A) ମାଟିଆ

(B) ହୁଲିଆ

(C) ପାହାଡ଼ିଆ

(D) ତେଲିଆ

12. 'ଲୀନ' ପଦଟି କେଉଁ କୃତ୍‌ ପ୍ରତ୍ୟୟ ଦ୍ୱାରା ଗଠିତ ?

(A) ଈନ୍‌

(B) ନ

(C) ତ

(D) ଈନ

13. ନିମ୍ନପ୍ରଦତ୍ତ ଶବ୍ଦଗୁଡ଼ିକ ମଧ୍ୟରୁ କେଉଁଟିରେ 'ଷତ୍ୱ' ବିଧି ନିୟମର ବ୍ୟତିକ୍ରମ ଘଟିଛି ?

(A) ନୋଟିସ୍‌

(B) ଅନୁସନ୍ଧାନ

(C) ଧୂଲିସାତ୍‌

(D) ଦିବସ

14. 'କାନ୍ଧ ଲଗାଇବା' ରୂଢ଼ିର ଅର୍ଥ କ'ଣ ?

    (A) କଠିନ ପରିଶ୍ରମ କରିବା

    (B) ବାଧ୍ୟ କରିବା

    (C) ସାହାଯ୍ୟ କରିବା

    (D) ଅନିଷ୍ଟ ଭାବରେ କାର୍ଯ୍ୟ କରିବା

15. ଇନ୍ଦ୍ରାୟୁଧେ ତାର ଅଧ-ବିମ୍ବେ ନଭେ ଯେଉଁ ତୁଳନା ତହୁଁ ବଳି ଇହୁ ସଙ୍ଗେ ସୁନ୍ଦରୀର ତୁଳା ଅଳଣା । — ଏଥିରେ କେଉଁ ଅଳଙ୍କାର ପ୍ରଯୁକ୍ତ ?

    (A) ଉପମା

    (B) ଉତ୍ପ୍ରେକ୍ଷା

    (C) ବ୍ୟତିରେକ

    (D) ଅନୁପ୍ରାସ

16. ସେ ଗେଢ଼ି କରିବାରୁ ଦଣ୍ଡ ପାଇଲା । — ଏହା କେଉଁ ପ୍ରକାର ବାକ୍ୟ ?

    (A) ସରଳ

    (B) ଜଟିଳ

    (C) ଯୌଗିକ

    (D) ମିଶ୍ର

17. ତାଙ୍କର ମାତୃଭାଷା ପ୍ରତି ପ୍ରଗାଢ଼ ଅନୁରାଗ ରହିଛି । — ରେଖାଙ୍କିତ ପଦଟି କେଉଁ ପ୍ରକାର ଅବ୍ୟୟ ?

    (A) ବିଭକ୍ତିସୂଚକ

    (B) ନିଶ୍ଚୟବୋଧକ

    (C) ଭାବବାଚକ

    (D) ପଦାନ୍ୱୟୀ

18. ପିଲାଟି ଭୂମିରେ ଶୟନ କରିଛି । — ଏଠାରେ 'ଶୟନ' କେଉଁ ପଦ ?

    (A) ବିଶେଷଣ

    (B) କ୍ରିୟା

    (C) ବିଶେଷ୍ୟ

    (D) ସର୍ବନାମ

19. ଶୁଦ୍ଧ ବାକ୍ୟଟିକୁ ଚିହ୍ନାଅ :

    (A) ବାରାଣସୀ ଭାରତର ସବୁଠାରୁ ପ୍ରାଚୀନତମ ନଗରୀ ।

    (B) ଶିକ୍ଷକ ଛାତ୍ରକୁ ସଂକ୍ଷେପରେ ଉତ୍ତର ଦେବାକୁ କହିଲେ ।

    (C) କୋଣାର୍କର କାରୁକାର୍ଯ୍ୟ ଓଡ଼ିଆ ଶିଳ୍ପୀର ନିର୍ମାଣ ପାଟବତା ପ୍ରକାଶିତ କରେ ।

    (D) ଭାରତବର୍ଷ ଆକୁମାରୀ ହିମାଚଳ ପର୍ଯ୍ୟନ୍ତ ବିସ୍ତୃତ ।

20. ଶୁଦ୍ଧ ଶବ୍ଦଟିକୁ ବାଛ :

    (A) ସମ୍ୟାନ୍ତଶାଳୀ

    (B) ପୂଜାନ୍ଧ

    (C) ଉର୍ଦ୍ଧ

    (D) ଭୁବନେଶ୍ୱର

| A – SECTION – II |
| ENGLISH (COMPULSORY) |

Read the poem carefully and answer the questions (Q. Nos. 21 to 25) choosing the correct alternatives given :

Weavers, weaving at break of day,

Why do you weave a garment so gay ?

Blue as the wing of a blue bird wild,

We weave the robes of a new-born
child.

Weavers, weaving at fall of night,

Why do you weave a garment so
bright ?

Like the plumes of a peacock, purple
and green,

We weave the marriage-veils of a
queen.

Weavers, weaving solemn and still,

What do you weave in the moonlight
chill ?

White as a feather and white as a
cloud,

We weave a dead man's funeral
shroud.

21. What do the weavers weave in the early morning ?

(A) Robes of a new-born child

(B) A dull grey cloth

(C) A soft white cloth

(D) A red coloured veil

22. The _____ is purple and green coloured.

(A) dress of the weavers

(B) dress of a newborn child

(C) the queen's marriage veil

(D) the robe of a king

23. What do the weavers weave in the chilly moonlight ?

(A) A garment light as a feather

(B) A garment meant to cover a dead man

(C) A garment to keep away the chill

(D) The garment of a new-born child

24. Whom does the poet address in the poem ?

(A) Weavers

(B) Children

(C) A queen

(D) A bird

25. The word 'solemn' used in the poem means

(A) excited

(B) happy

(C) ignorant

(D) serious

Read the passage carefully and answer the questions (from Q. Nos. 26 to 30) choosing the correct alternatives given) :

Human beings are physically weaker than animals. But they have managed to become the most powerful creature on earth. They do not depend on physical strength. They get power from knowledge. Knowledge makes them more powerful by giving them mental, moral and spiritual strength. They have the ability to acquire knowledge by continuous practice with patience. They preserve their knowledge in books in order to pass it to new generations. Neither money can buy nor can physical strength steal knowledge. Knowledge gives them power to know how to control the forces of nature and then use these forces for their own benefit.

26. What makes human beings more powerful than animals ?

(A) Patience

(B) Knowledge

(C) Practice

(D) Physical strength

27. Knowledge gives the human beings

(A) envy

(B) greed

(C) physical strength

(D) power

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28. How do human beings preserve their knowledge ?

(A) In memory

(B) In library

(C) In books

(D) In heart

29. Which is opposite in meaning to 'patience' ?

(A) Impatience

(B) Patiently

(C) Mispatience

(D) Unpatience

30. The word 'acquire' as used in the passage means

(A) manage

(B) preserve

(C) gain something by one's own effort

(D) control

Answer the questions (Q. Nos. 31 to 40) as directed choosing the correct alternatives given :

31. The next day, people _____ came along the road, saw the stone. (Pick out the correct particle.)

(A) whose

(B) who

(C) whom

(D) when

32. They said, _____.

(Fill in the blank with the correct alternative.)

(A) "How dangerous the road has become !"

(B) "How dangerous has the road become !"

(C) "How dangerous has become the road !"

(D) "How dangerous the road !"

33. "Had the government been careful, such things _____."

(Fill in the blank with the correct alternative.)

(A) will not have happened

(B) will not happen

(C) would not have happened

(D) would have not happened

34. One day, the king commanded his soldiers, _____.

(Complete the sentence with the correct alternative.)

(A) "Remove it."

(B) "Removed it."

(C) "You remove it."

(D) that "Remove it."

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35. The crowd gathered there became dumb. (Which letter in 'dumb' is silent in pronunciation ?)

   (A) m

   (B) b

   (C) u

   (D) d

36. A certain king _____ (worry). (Use the correct form of the verb given in brackets.)

   (A) worried

   (B) was wearied

   (C) was worried

   (D) was worry

37. His subjects were lazy and careless. (Pick out the correct pronunciation of 'lazy')

   (A) /leɪzi/

   (B) /lezi/

   (C) /lezi:/

   (D) /leɪzi:/

38. He thought of a plan to teach them a lesson. The correct pronunciation of 'teach' is

   (A) /titʃ/

   (B) /tiːtʃ/

   (C) /tiːʒ/

   (D) /tiːtʃə/

39. He put a packet of gold coins in the middle of a road. The phrasal verb for 'put' is

   (A) lay down

   (B) lie down

   (C) lied down

   (D) lying down

40. He covered it _____ a piece of large stone. (Use the correct preposition.)

   (A) for

   (B) in

   (C) on

   (D) with

B – SECTION – III

ARTS GROUP

ODIA (OPTIONAL)

41. 'ମନସିଜ' — ଏହା କେଉଁ ସମାସର ଅନ୍ତର୍ଗତ ?

   (A) ତତ୍‌ପୁରୁଷ

   (B) ଅଲୁକ୍‌

   (C) ବହୁବ୍ରୀହି

   (D) କର୍ମଧାରୟ

42. 'ତୋ ବିନା ନାହିଁ ଅନ୍ୟ ଗତି ।' — ରେଖାଙ୍କିତ

   ପଦଟି କେଉଁ ବିଭକ୍ତିଯୁକ୍ତ ?

   (A) ଦ୍ୱିତୀୟା

   (B) ତୃତୀୟା

   (C) ଷଷ୍ଠୀ

   (D) ସପ୍ତମୀ

43. ମାଘ ମାସରେ ବାଘ ପରି ଶୀତ ହୁଏ ।

   — ରେଖାଙ୍କିତ ପଦର କାରକ ନିର୍ଣ୍ଣୟ କର ।

   (A) କର୍ତ୍ତା କାରକ

   (B) କର୍ମ କାରକ

   (C) ଅପାଦାନ କାରକ

   (D) ଅଧିକରଣ କାରକ

44. 'ସନ୍ନିବିଷ୍ଟ' ଶବ୍ଦର ସନ୍ଧିବିଚ୍ଛେଦ କଲେ କ'ଣ

   ହେବ ?

   (A) ସମ୍‌ + ନିବିଷ୍ଟ

   (B) ସନ୍‌ + ନିବିଷ୍ଟ

   (C) ସମ୍‌ + ଈବିଷ୍ଟ

   (D) ସନ୍‌ + ଈବିଷ୍ଟ

45. ଶୁଦ୍ଧ ଶବ୍ଦଟିକୁ ଚିହ୍ନାଅ :

   (A) ମରୁଦ୍ୟାନ

   (B) ଆଶୀଷ

   (C) ଶିକାର

   (D) ହୃଷ୍ଟପୁଷ୍ଟ

ଅନୁଚ୍ଛେଦଟି ପାଠ କରି ପ୍ରଶ୍ନ ନଂ **46** ର ଉତ୍ତର ବାଛ :

ବିପ୍ଲବ ଖାଲି ବାହାରେ ଘଟୁନି, ମଣିଷର ଚେତନାରେ ବି

ଘଟୁଛି । ବିଂଶ ଶତାବ୍ଦୀର ଦର୍ଶନ ସାହସିକତାର ଦର୍ଶନ ।

ଆଜିର ଦାର୍ଶନିକ ଆହ୍ୱାନ କରୁଛି, ଏ ଜୀବନ ଯଦି

ପୋଡ଼ାଭୁଇଁ ତେବେ ସେଇଠି ତମର ତମୁ ପକାଅ ।

ପୃଥିବୀକୁ ଅନ୍ଧକାର କରି ଯଦି ଈଶ୍ୱର ଅନ୍ତର୍ଦ୍ଧାନ ହେଲେ ତେବେ ଅନ୍ଧାରରେ ବଞ୍ଚିବାକୁ ପ୍ରସ୍ତୁତ ହୁଅ । ଏତେ ବଡ଼ ସାହସ ଇତିହାସରେ ମଣିଷ କେବେ କରି ନଥିଲା । ଆଜି ସେ ସବୁ ନିଷିଦ୍ଧ ଫଳ ଗ୍ରହଣ କରିବାକୁ ତିଆର । କାନ୍ଧରେ ଜୀବନର ଉଭୟତାକୁ ବହନ କରି ଓ ହାତରେ ସାମ୍ୟବାଦର ପତାକା ଧରି ଦିଗ୍‌ବଳୟ ସୀମାରେ ନୂଆ ମଣିଷ ଦିଶିଲାଣି । ସେ ଆଜି ସମଷ୍ଟିଭାବେ ସାମ୍ୟବାଦୀ, ବ୍ୟଷ୍ଟିଭାବରେ ସ୍ଥିତିବାଦୀ, ବଞ୍ଚିବାର ଏହା ଏକ ପରୀକ୍ଷା ।

46. କେଉଁ କାରଣଯୋଗୁ ଆଜିର ମଣିଷ ବଞ୍ଚିବାର ପରୀକ୍ଷା କରୁଛି ?

   (A) ସେ ସାହସୀ ହୋଇଥିବାରୁ

   (B) ବ୍ୟକ୍ତିଗତଭାବେ ସ୍ଥିତିବାଦୀ ହେବାଯୋଗୁ

   (C) ଚେତନାର ବିପ୍ଳବଯୋଗୁ

   (D) ସାମ୍ୟବାଦଦ୍ୱାରା ପ୍ରଭାବିତ ହୋଇଥିବାରୁ

47. 'ଜିଜୀବିଷା' — ଏହାକୁ ବହୁପଦରେ ପ୍ରକାଶ କଲେ କ'ଣ ହେବ ?

   (A) ଜୀଇ ରହିବାର ଇଚ୍ଛା

   (B) ଜୟ କରିବାର ଇଚ୍ଛା

   (C) ନିଷ୍ଠା କରିବାର ଇଚ୍ଛା

   (D) ଜାଣିବାର ଇଚ୍ଛା

48. କଳଙ୍କ ହିଁ ଥାଇ   କଳାକାର-କୋଳେ

   କରଇ ନେତ୍ର ରଞ୍ଜନ,

   ସ୍ୱଭାବ-ସୁନ୍ଦର   ଅଙ୍ଗକୁ ଜଗତେ

   ନୁହଇ କିସ ମଣ୍ଡନ ?

   — ଏଥିରେ କେଉଁ ଅଳଙ୍କାର ପ୍ରଯୁକ୍ତ ?

   (A) ଉତ୍‌ପ୍ରେକ୍ଷା

   (B) ଅର୍ଥାନ୍ତରନ୍ୟାସ

   (C) ରୂପକ

   (D) ଉପମା

49. ଚିରଦିନ ଦୁଃଖ-ପ୍ରହାରେ ଜର୍ଜର

   ପଡ଼ଶିଷ୍ୟ ମୁହିଁ ଦୁଃଖ-ଗୁରୁଙ୍କର ।

   — ଏହା କେଉଁ ଛନ୍ଦରେ ରଚିତ ?

   (A) ଗୁଜ୍ଜରୀ

   (B) ବଙ୍ଗଲାଶ୍ରୀ

   (C) ନଟବାଣୀ

   (D) ଗେଣ୍ଠ

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50. 'ହାତ ଶଙ୍ଖା ଦର୍ପଣ' — ରୂଢ଼ିଟିର ଅର୍ଥ କ'ଣ ?

   (A) ସୁଖମୟ ଦାମ୍ପତ୍ୟ ଜୀବନ

   (B) ପରିଷ୍କାର ପରିଚ୍ଛନ୍ନତା

   (C) ବିଭା ହେବା

   (D) ମେଳ ଖାଇବା

51. ଜୋର ଯାହାର, ମୁଲକ ତାହାର । — ଏହା କେଉଁ ପ୍ରକାର ବାକ୍ୟ ?

   (A) ସରଳ

   (B) ମିଶ୍ର

   (C) ଯୌଗିକ

   (D) ଜଟିଳ

52. କେଉଁ ଶବ୍ଦରେ 'ର' ପ୍ରତ୍ୟୟ ପ୍ରଯୁକ୍ତ ?

   (A) ମଧୁର

   (B) ଗୌର

   (C) ଆସୁର

   (D) କୌମାର

53. 'ଦୃଷ୍ଟି' ଶବ୍ଦରେ ବ୍ୟବହୃତ କୃତ୍ ପ୍ରତ୍ୟୟଟି କ'ଣ ?

   (A) ଈ

   (B) ଟି

   (C) ଷ୍ଟି

   (D) ତି

54. ସୀତା ପତିଙ୍କ ସହିତ ବନକୁ ଗମନ କରିଥିଲେ । — ରେଖାଙ୍କିତ ଅଂଶଟି କେଉଁ ପଦ ?

   (A) ସର୍ବନାମ

   (B) ଅବ୍ୟୟ

   (C) ବିଶେଷଣ

   (D) ବିଶେଷ୍ୟ

55. 'ସ୍ତୁତି ଚିନ୍ତାମଣି' କେଉଁ କବିଙ୍କ ଦ୍ୱାରା ରଚିତ ?

   (A) ଉପେନ୍ଦ୍ର ଭଞ୍ଜ

   (B) ଜଗନ୍ନାଥ ଦାସ

   (C) ଭୀମଭୋଇ

   (D) ସାରଳା ଦାସ

B – SECTION – III

ARTS GROUP
ENGLISH (OPTIONAL)

Answer the questions (Q. Nos. 56 to 64) as directed choosing the correct alternatives given :

56. The woman _____ is her mother. (Choose the correct grammatical option.)

    (A) who feeds the baby girl

    (B) whose feeds the baby girl

    (C) whom feeds the baby girl

    (D) she feeds the baby girl

57. The correct pronunciation of 'baby' is

    (A) /bebi/

    (B) /beɪbi/

    (C) /beɪbi:/

    (D) /bebi:/

58. A woman is feeding a baby.

    The passive form of the sentence is _____.

    (A) A woman feeds a baby

    (B) A baby is being fed by a woman

    (C) A baby is fed by a woman

    (D) A baby was being fed by a woman

59. In Communicative Language Teaching _____.

    (A) Mother tongue is not used.

    (B) Mother tongue is often used.

    (C) Mother tongue is sometimes used.

    (D) Mother tongue is always used.

60. The objective of Direct Method is to develop _____.

(A) Reading skills

(B) Listening skills

(C) Speaking skills

(D) All the four language skills

61. Mother tongue is freely used by the teacher and the students in _____ Method.

(A) Direct

(B) Audio-lingual

(C) Grammar-Translation

(D) Structural Oral situational

62. By asking a child to speak a language, the teacher tests his/her _____.

(A) Knowledge of literature

(B) Proficiency of speaking

(C) Acting talent

(D) Comprehension

63. She wears an earring. (Choose the phrasal verb for 'wears')

(A) puts out

(B) puts off

(C) puts on

(D) puts up

64. The woman looks _____ the baby with care. (Fill in the blank with the appropriate preposition.)

(A) for

(B) on

(C) into

(D) after

Read the poem carefully and answer the questions (Q. Nos. 65 to 67) choosing the correct alternatives given :

Is the moon tired ? She looks so pale

Within her misty veil :

She scales the sky from east to west,

And takes no rest.

Before the coming of the night

The moon looks papery white;

Before the dawning of the day

She fades away.

65. The moon looks pale because

    (A)   it is tired

    (B)   it takes no rest

    (C)   it is covered with mist

    (D)   it scales the sky

66. When does the moon appear papery white ?

    (A)   At dawn

    (B)   Before nightfall

    (C)   At night

    (D)   After dawn

67. What does the expression 'fade' mean ?

    (A)   Disappear slowly

    (B)   Rise slowly

    (C)   Scale the sky

    (D)   No rest

Read the passage carefully and answer the questions (Q. No. 68 to 70) choosing the correct alternatives given :

Alfred Hitchcock was a man with vivid imagination, strong creative skills and a passion for life. He has produced and directed some of the most thrilling films that had the audience almost swooning with fright and falling off their seats with laughter. At the age of 20, he took up a job at the office of Paramount Studio, London. He took great pleasure in working in the studio

and often worked all seven days a week. He moved to the USA in 1939 and here, he produced many more films and hosted a weekly television show. No matter from where his ideas came, whether a magazine article, a mystery novel or incident, his films had the typical "Hitchcock touch" — where the agony of suspense was relieved by interludes of laughter.

68. What qualities helped Hitchcock achieve success ?

(A) His imagination, creativity and passion for life

(B) His hard work, imagination and sense of humour

(C) His creativity, passion for life and sense of humour

(D) His imagination, talent and dedication

69. What did the typical Hitchcock-style of film-making include ?

(A) Fear and passion

(B) Fear and humour

(C) Suspense and laughter

(D) Fear and suspense

70. What is the meaning of the word 'swooning' ?

(A) Fainting

(B) Falling

(C) Hiding

(D) Becoming conscious

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(Continued)

B – SECTION – III
ARTS GROUP
HISTORY & POLITICAL SCIENCE

71. Which ruler of India did accept the Subsidiary Alliance of Lord Wellesley first ?

    (A) Peshwa Bajirao

    (B) Nana Saheb

    (C) Kunwar Singh

    (D) Nizam of Hyderabad

72. Where is a brick temple of Gupta Age found ?

    (A) Tigwa

    (B) Bhumra

    (C) Bhitargaon

    (D) Deogarh.

73. Who was the head of the State News Agency during the Sultanate ?

    (A) Diwan-i-Insha

    (B) Naib-ul-Mulk

    (C) Wakil-i-dar

    (D) Barid-i-Mumalik

74. Who did build Panch Mahal in Fatehpur Sikri ?

    (A) Akbar

    (B) Jahangir

    (C) Noor Jahan

    (D) Shah Jahan

75. Who was the author of Mudrarakshasa ?

    (A) Kalidasa

    (B) Visakhadutta

    (C) Bhasa

    (D) Sudraka

76. Which country did Archduke Francis Ferdinand belong to ?

    (A) Austria

    (B) Prussia

    (C) England

    (D) France

77. When did the Second World War come to an end ?

    (A) April 30, 1945

    (B) May 7, 1945

    (C) August 9, 1945

    (D) August 14, 1945

78. Who did represent England in the Paris Peace Conference ?

   (A) Orlando

   (B) Lloyd George

   (C) Clemenceau

   (D) Woodrow Wilson

79. Who was the Czar of Russia during the first phase of Russian Revolution ?

   (A) Alexander I

   (B) Alexander III

   (C) Nicholas I

   (D) Nicholas II

80. Where was revolutionary Chandrasekhar Azad killed by the British police ?

   (A) Kanpur

   (B) Delhi

   (C) Allahabad

   (D) Faizabad

81. When was an agreement between India and China signed to create the Actual Line of Control ?

   (A) 1962

   (B) 1993

   (C) 1995

   (D) 2002

82. How many permanent member countries are there in the Security Council of the United Nations ?

   (A) 05

   (B) 07

   (C) 12

   (D) 13

83. Who can dismiss the Election Commission of Odisha ?

   (A) Governor

   (B) Chief Minister

   (C) President

   (D) Chief Secretary

84. What can be the maximum number of members of the Lok Sabha ?

   (A) 547

   (B) 550

   (C) 552

   (D) 554

85. According to which Article of our Constitution have the Fundamental Duties been incorporated ?

   (A) 51 (A)

   (B) 52

   (C) 29

   (D) 30

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B – SECTION – III
ARTS GROUP
GEOGRAPHY AND ECONOMICS

86. Which is considered as the mother of all central banks ?

   (A) Federal Reserve Bank

   (B) Bank of England

   (C) Risks Bank of Sweden

   (D) Reserve Bank of India

87. The Phillips curve shows the relationship between inflation and what ?

   (A) The balance of trade

   (B) The rate of growth in an economy

   (C) The rate of price increase

   (D) Unemployment

88. The inflation faced by India at present is

   (A) cost-push inflation

   (B) unrealistic inflation

   (C) demand-pull inflation

   (D) secondary inflation

89. Which age group is included to calculate child sex ratio in India ?

   (A) 0-5 months

   (B) 0-5 years

   (C) 0-6 months

   (D) 0-6 years

90. Which of the following statements is not correct about Indira Awas Yojana ?

   (A) It was launched on 1985-86

   (B) Now it has become a part of Bharat Nirman Programme

   (C) A minimum of 60% of funds used for the construction of houses of SC/STs

   (D) Its financial burden is shared by the states in the ratio of 50 : 50

91. Which of the following places has a Rail Wheel factory ?

   (A) Chennai

   (B) Kolkata

   (C) Bengaluru

   (D) Varanasi

92. Which is not an off-shore oil field in India ?

   (A) Aliabet

   (B) Ankleswar

   (C) Bassien

   (D) Bombay High

93. Three important rivers of Indian subcontinent have their sources near the Manasarovar lake. These rivers are :

(A) Brahmaputra, Indus, Sutlej

(B) Brahmaputra, Jhelum, Yamuna

(C) Brahmaputra, Ganga, Indus

(D) Jhelum, Sutlej, Indus

94. The S.W. monsoon is an extension of which wind ?

(A) N.E. Trade wind

(B) S.E. Trade wind

(C) S.W. Westerlies

(D) N.W. Westerlies

95. Which of the following influences ocean salinity ?

(A) Land

(B) Wind

(C) River

(D) Ash from volcanoes

96. Which force does not allow the wind to reach the centre of a low pressure area ?

(A) Centrifugal force

(B) Centripetal force

(C) Coriolis force

(D) Frictional force

97. The residual hills in the desert region are known in which name ?

(A) Playa

(B) Inselberg

(C) Monadnock

(D) Pediment

98. Which of the following hills does belong to a different physiographic division of India ?

(A) Patkai

(B) Garo

(C) Mikir

(D) Khasi

99. International dateline passes through which strait ?

(A) Gibraltar

(B) Palk

(C) Bering

(D) Sunda

100. In case of which relief feature do the contour lines join with each other ?

(A) Plateau

(B) 'V' shaped valley

(C) Convex slope

(D) Waterfall

(Continued)

B – SECTION – III
SCIENCE (PCM)
PHYSICS

41. Specific heat at constant pressure and specific heat at constant volume of nitrogen gas respectively in terms of gas constant R are

   (A) $\frac{3}{2}R$, $\frac{5}{2}R$

   (B) $\frac{5}{2}R$, $\frac{7}{2}R$

   (C) $\frac{7}{2}R$, $\frac{5}{2}R$

   (D) $\frac{5}{2}R$, $\frac{3}{2}R$

42. The temperature at which velocity of sound will be double of its room temperature (27°C) value is

   (A) 54°C   (B) 300°C

   (C) 927°C   (D) 1200°C

43. Length of a string tied to two rigid supports is 20 cm. Maximum wavelength of a stationary wave produced on it is

   (A) 10 cm

   (B) 20 cm

   (C) 40 cm

   (D) 80 cm

44. The velocity of light in water of refractive index $\frac{4}{3}$ in ms^{-1} is

   (A) $1\cdot33 \times 10^8$

   (B) $2\cdot25 \times 10^8$

   (C) 3×10^8

   (D) 4×10^8

45. An object is placed between the focus and pole of a double convex lens. The image is

   (A) virtual, erect and magnified

   (B) virtual, erect and diminished

   (C) real, inverted and magnified

   (D) real, erect and diminished

46. If the kinetic energy of a body is doubled then its momentum increases by

   (A) 2 times

   (B) 4 times

   (C) $\sqrt{2}$ times

   (D) 8 times

47. If the horizontal range of a projectile is 64 m then the maximum height attained by the projectile is

   (A) 16 m

   (B) 32 m

   (C) 64 m

   (D) 128 m

48. Work done when a force $\vec{F} = (2\hat{i} - 3\hat{j} + 5\hat{k})N$ acting on a particle takes it from the point $\vec{r_1} = (\hat{i} + 2\hat{j} - 3\hat{k})m$ to the point $\vec{r_2} = (3\hat{i} + 5\hat{j} + \hat{k})m$ is

   (A) 7 J   (B) 15 J

   (C) 25 J   (D) 38 J

49. What is the ratio of potential energy to kinetic energy of a body executing simple harmonic motion when the displacement is equal to one-third of the amplitude ?

   (A) 1 : 8

   (B) 8 : 1

   (C) 1 : 3

   (D) 1 : 9

50. If the earth expands to twice of its present radius then duration of the day will be

   (A) 6 hours

   (B) 12 hours

   (C) 24 hours

   (D) 96 hours

51. The minimum magnifying power of a telescope is M. If the focal length of its eye-piece is halved its magnifying power will be

   (A) $\dfrac{M}{2}$

   (B) M

   (C) 2 M

   (D) 4 M

52. If in a Young's double slit experiment the distance between the two slits is halved and the distance between the slit and the screen is doubled, then fringe width

   (A) remains the same

   (B) decreases by 4 times

   (C) increases by 4 times

   (D) increases by 2 times

63241   XX (P-I)-01   [22]

(Continued)

53. The flux associated with each wall of a cube having a charge Q at its centre is

(A) $\dfrac{Q}{\epsilon_0}$

(B) $\dfrac{Q}{2\epsilon_0}$

(C) $\dfrac{Q}{4\epsilon_0}$

(D) $\dfrac{Q}{6\epsilon_0}$

54. The potential on the surface of a thin spherical shell of radius 10 cm is 10 V. The potential at a distance of 5 cm from the centre of the shell is

(A) 0 V

(B) 5 V

(C) 10 V

(D) 20 V

55. Ten capacitors, each of capacitance 10 µF are first connected in series and then in parallel. The ratio of equivalent capacitance in series to equivalent capacitance in parallel is

(A) $\dfrac{1}{100}$

(B) 100

(C) $\dfrac{1}{10}$

(D) 10

56. The relation between escape velocity (v_e) and orbital velocity (v_o) on the surface of the earth is

(A) $v_e = \sqrt{2}\, v_o$

(B) $v_e = 2\, v_o$

(C) $v_o = \sqrt{2}\, v_e$

(D) $v_o = 2\, v_e$

57. If the distance between the sun and the earth is doubled then the duration of the year will be

(A) 2 years

(B) $2\sqrt{2}$ years

(C) 4 years

(D) 8 years

58. Young's modulus of steel is

(A) equal to that of rubber

(B) less than that of rubber

(C) greater than that of rubber

(D) none of the above

59. A solid sphere of radius R is falling in a viscous medium. The terminal velocity attained by the falling body will be proportional to

(A) R^2

(B) R

(C) $\dfrac{1}{R}$

(D) $\dfrac{1}{R^2}$

60. A liquid will not wet the surface of a solid if the angle of contact is

(A) 0°

(B) 45°

(C) 60°

(D) 120°

B – SECTION – III
SCIENCE (PCM)
CHEMISTRY

61. The mineral of iron is
    (A) Malachite
    (B) Cassiterite
    (C) Magnetite
    (D) Pyrolusite

62. The solubility product constant expression for
    $Ag_3 PO_4 \rightleftharpoons 3A_g^+ + PO_4^{3-}$ is
    (A) $K_{sp} = [Ag^+][PO_4^{3-}]$
    (B) $K_{sp} = [Ag^+][PO_4^{3-}]^3$
    (C) $K_{sp} = [3Ag^+]^3[PO_4^{3-}]$
    (D) $K_{sp} = 3[Ag^+][PO_4^{3-}]$

63. Among following reactions, an example of calcination process is
    (A) $FeO + SiO_2 \rightarrow FeSiO_3$
    (B) $Fe_2O_3 + 3C \rightarrow 2Fe + 3CO$
    (C) $2ZnS + 3O_2 \rightarrow 2ZnO + 2SO_2$
    (D) $MgCO_3 \rightarrow MgO + CO_2$

64. The IUPAC name of
    $CH_3 - CH - CH - C - OH$ is
    with Br, NO₂, O attached
    (A) 3-Bromo-2-Nitro butanoic acid
    (B) 3-Nitro-2-Bromo butanoic acid
    (C) 4-Bromo-3-Nitro butanoic acid
    (D) 1-Carboxy-2-Nitro-3-Bromo propane

65. A small drop of liquid is spherical in shape due to
    (A) low viscosity
    (B) surface tension
    (C) hydrogen-bonding
    (D) low density

66. According to VSEPR theory, the shape of XeF_4 molecule is
    (A) Octahedral
    (B) Square planar
    (C) Linear
    (D) Tetrahedral

67. The alkane obtained by the electrolysis of aqueous concentrated solution of sodium acetate is
    (A) CH_4
    (B) $CH_3 CH_2 CH_3$
    (C) $CH_3 CH_2 CH_2 CH_3$
    (D) $CH_3 CH_3$

68. The reaction between HCl and Na_2CO_3 is represented by the equation
    $Na_2CO_3 + 2HCl \rightarrow 2NaCl + CO_2 + H_2O$
    If 25 ml of 0·05 N Na_2CO_3 solution is neutralized by 50 ml of HCl, the concentration of HCl is
    (A) 0·01 N   (B) 0·025 N
    (C) 0·1 N   (D) 0·05 N

69. The oxidation number of an element in a compound is evaluated on the basis of certain rules. Which of the following rules is not correct in this respect ?

(A) Oxidation number of hydrogen is always + 1

(B) Algebraic sum of oxidation number of all elements in the compound is zero

(C) An element in the free or uncombined state has zero oxidation number

(D) In all compounds oxidation number of fluorine is – 1

70. Among the species H_3O^+, NH_3, BeH_2, BCl_3, the central atom of one that undergoes sp^2-hybridisation is

(A) H_3O^+ (B) BCl_3

(C) NH_3 (D) BeH_2

71. The correct order of electron affinity among halogens is

(A) F > Cl > Br > I

(B) Cl < F > Br > I

(C) Cl > F > Br > I

(D) F > Br > Cl > I

72. The volume of a gas increases from 150 ml to 450 ml on heating. If the original temperature of the gas is 300 K, up to what temperature the gas has been heated ?

(A) 300 K   (B) 600 K

(C) 450 K   (D) 900 K

73. The reaction in which two compounds exchange their ions to form two new compounds is an example of

(A) displacement reaction

(B) combination reaction

(C) double displacement reaction

(D) redox reaction

74. Arrange the following species from left to right in the increasing order of their ionic radii.

Na^+, F^-, Mg^{2+}, O^{2-}.

(A) $F^- < Mg^{2+} < Na^+ < O^{2-}$

(B) $Mg^{2+} < Na^+ < F^- < O^{2-}$

(C) $Na^+ < O^{2-} < F^- < Mg^{2+}$

(D) $Mg^{2+} < Na^+ < O^{2-} < F^-$

75. The correct order of stability of the carbocations

I. CH_3^+

II. $(CH_3)_3C^+$

III. $CH_3 - CH_2^+$ and

IV. $(CH_3)_2\overset{+}{C}H$ is

(A) I > III > IV > II

(B) II > III > IV > I

(C) I > IV > II > III

(D) II > IV > III > I

63241   XX (P-I)-01   [25]   (Turn over)

76. The arrangement of the following in the increasing order of their masses is

I. 1.5 mole of O_2

II. 0.5 g atom of oxygen

III. 3.01×10^{23} molecules of oxygen

IV. 5.6 litres of CO_2 at STP.

(A) II < I < IV < III

(B) IV < II < III < I

(C) II < IV < III < I

(D) I < II < III < IV.

77. Which set of quantum numbers correctly defines one electron in an atomic orbital with $n = 2$, $l = 0$?

(A) $n = 2$ $l = 0$ $m = 0$ $s = +1$

(B) $n = 2$ $l = 0$ $m = 0$ $s = +\dfrac{1}{2}$

(C) $n = 2$ $l = 0$ $m = 1$ $s = +\dfrac{1}{2}$

(D) $n = 2$ $l = 0$ $m = 1$ $s = -\dfrac{1}{2}$

78. The product(s) obtained by the reaction of chlorobenzene with Cl_2 in presence of $FeCl_3$ is (are)
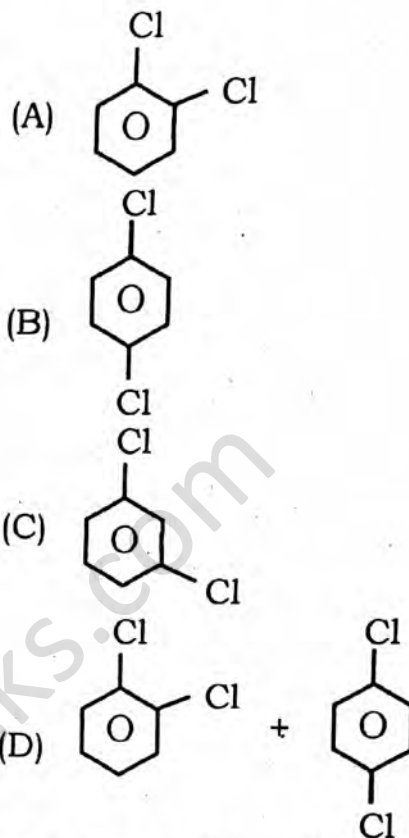
79. Which of the following rules explains the presence of maximum number of unpaired electrons in a given subshell ?
(A) Octet rule
(B) Pauli's exclusion principle
(C) Hund's rule
(D) Aufbau principle

80. $N_2(g) + 3H_2(g) \rightleftharpoons 2NH_3(g)$
At equilibrium, if the pressure is increased at constant temperature, there will be an increase in number of molecules of
(A) $N_2(g)$ only
(B) $H_2(g)$ only
(C) $NH_3(g)$ only
(D) both $N_2(g)$ and $H_2(g)$

63241   XX (P-I)-01   [26]   (Continued)

$k = 7$

B – SECTION – III
SCIENCE (PCM)
MATHEMATICS

81. If a line passing through $(3, k)$ and $(2, 7)$ is parallel to the line passing through $(-1, 4)$ and $(0, 6)$, then what is the value of k?

   (A) 6   (B) 7

   (C) 8   (D) 9

82. What is the equation of the circle with centre at the mid-point of the line segment joining the points $(1, 1)$ and $(3, 3)$ and radius?

   (A) $x^2 + y^2 - 4(x + y) + 7 = 0$

   (B) $x^2 + y^2 - 4(x + y) + 8 = 0$

   (C) $x^2 + y^2 + 4(x + y)$

   (D) $x^2 + y^2 + 4(x + y) + 8 = 0$

83. What is the diameter of the sphere?

   $x^2 + y^2 + z^2 - 16x + 12y - 2\sqrt{d}\, z + d = 0$

   (A) 40

   (B) 20

   (C) 10

   (D) 5

84. A box contains 100 bulbs out of which 10 are defective. What is the probability that out of a sample of 5 bulbs, exactly 3 are defective?

   $\frac{10}{100}$

   (A) $\dfrac{9^3}{105}$

   (B) $\dfrac{9^2}{10^4}$

   (C) $\dfrac{9}{10^3}$

   (D) $\dfrac{9^3}{10^4}$

85. What is the variance of first five positive integers?

   (A) $\sqrt{2}$ (B) $2\sqrt{2}$

   (C) 8   (D) 20

86. If $|A| = 50$, $|A \cap B| = 45$ and $|B| = 48$, then what is $P(A - B)$?

   $|A - B| = n(A) -$
   $= 50 - 45$
   $= 5$

   (A) 2^3

   (B) 2^2

   (C) 2^5

   (D) 2

87. Which of the following relations from $A = \{ a, b, c \}$ to $B = \{ a, b, c, d \}$ is a function ?

(A) $\{ (a, b), (b, c), (c, d), (b, b) \}$

(B) $\{ (b, b), (c, c), (a, a), (d, d) \}$

(C) $\{ (a, b), (b, c) \}$

(D) $\{ (a, a), (b, c), (c, d) \}$

88. If $A = \{ (5, 6) \}$ and $B = \{ 7, 8 \}$, then what is the number of relations from A to B ?

(A) 2^2 (B) 2^3

(C) 2^4 (D) 2^5

89. What is the number of divisors of 864 ?

(A) 24   (B) 30

(C) 36   (D) 42

90. If one of the roots of the quadratic equation $x^2 - 5x + p = 0$ is 3 more than the other, then what is the value of p ?

(A) 1   (B) 2

(C) 3   (D) 4

91. $ABCD$ is a quadrilateral. What is the value of $\cos \frac{1}{2} (A + C) + \cos \frac{1}{2} (B + D)$?

(A) 0

(B) 1

(C) $\sin \frac{1}{2} (B + D)$

(D) $\cos \frac{1}{2} (B + D)$

92. What is the maximum value of $\sin \theta . \cos \theta$?

(A) 1

(B) $\frac{1}{2}$

(C) 2

(D) 3

93. If the length of a side of an equilateral triangle is $2\sqrt{3}$ cm, then what is the radius of its circumcircle ?

(A) 1

(B) 2

(C) 3

(D) 4

94. A horse is placed for grazing inside a rectangular field 40 m by 36 m and tethered to a corner by a rope 14 m long. Over how much area can it graze ? (Take $\pi = \frac{22}{7}$)

   (A)   150 m^2

   (B)   152 m^2

   (C)   151 m^2

   (D)   154 m^2

95. What is the cofactor a_{23} of the matrix $\begin{bmatrix} -1 & 2 & 1 \\ -2 & 1 & 2 \\ 1 & 3 & -1 \end{bmatrix}$?

   (A)   – 5

   (B)   – 1

   (C)   5

   (D)   1

96. What about the set of natural numbers > 1 under multiplication ?

   (A)   It is a group

   (B)   It is a semigroup

   (C)   It is a monoid

   (D)   It is a subgroup

97. If $x = 2t$ and $y = 2t^2$, then what is $\frac{dy}{dx}$?

   (A) x

   (B) $2x$

   (C) x^2

   (D) $\frac{x}{2}$

98. What is the value of $\lim\limits_{x \to 0} \frac{\sin x°}{x}$?

   (A) π

   (B)   1

   (C) $\frac{\pi}{180}$

   (D) $\frac{180}{\pi}$

99. A.M. of two numbers a and b is 6 and GM of these numbers is 4, then what is $|\sqrt{a} - \sqrt{b}|$?

   (A)   2   (B)   4

   (C)   6   (D)   12

100. $x^2 - \frac{x^6}{3!} + \frac{x^{10}}{5!} - \;.... \;$ is

   Maclaurin series of which function ?

   (A) $\cos x$

   (B) e^{x^2}

   (C) $\cos x^2$

   (D) $\sin x^2$.

63241   XX (P-I)-01

[29]

(Turn over)

B – SECTION – III

SCIENCE (CBZ)

CHEMISTRY

41. The arrangement of the following in the increasing order of their masses is

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IV. 5.6 litres of CO_2 at STP.

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(B) IV < II < III < I

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42. Which set of quantum numbers correctly defines one electron in an atomic orbital with $n = 2$, $l = 0$?

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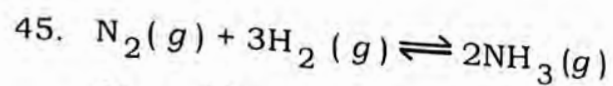43. The product(s) obtained by the reaction of chlorobenzene with Cl_2 in presence of $FeCl_3$ is (are)
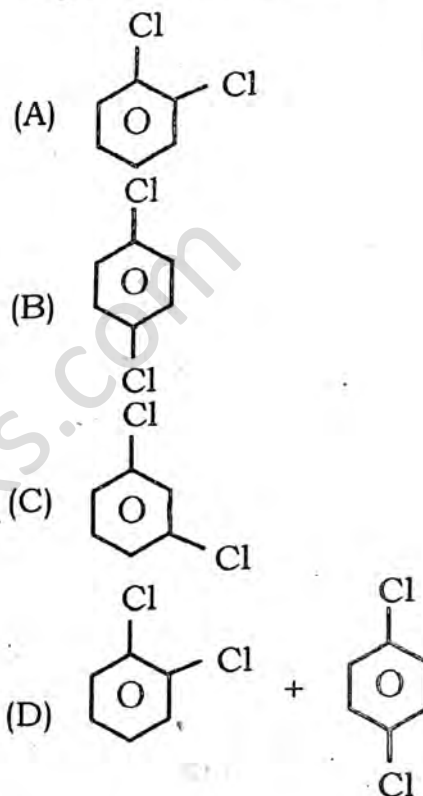
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(B) $Cl < F > Br > I$

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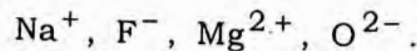
(A) $F^- < Mg^{2+} < Na^+ < O^{2-}$

(B) $Mg^{2+} < Na^+ < F^- < O^{2-}$

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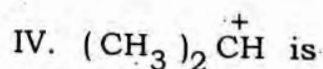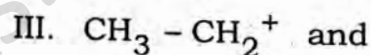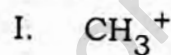
(A) $I > III > IV > II$

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(C) $I > IV > II > III$

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51. According to VSEPR theory, the shape of XeF_4 molecule is

(A) Octahedral

(B) Square planar

(C) Linear

(D) Tetrahedral

52. The alkane obtained by the electrolysis of aqueous concentrated solution of sodium acetate is

(A) CH_4

(B) $CH_3CH_2CH_3$

(C) $CH_3CH_2CH_2CH_3$

(D) CH_3CH_3

53. The reaction between HCl and Na_2CO_3 is represented by the equation

$$Na_2CO_3 + 2HCl \rightarrow 2NaCl + CO_2 + H_2O$$

If 25 ml of 0·05 N Na_2CO_3 solution is neutralized by 50 ml of HCl, the concentration of HCl is

(A) 0·01 N (B) 0·025 N
(C) 0·1 N (D) 0·05 N

54. The oxidation number of an element in a compound is evaluated on the basis of certain rules. Which of the following rules is not correct in this respect ?

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(D) $MgCO_3 \rightarrow MgO + CO_2$

59. The IUPAC name of

$$\underset{CH_3-}{} \overset{Br}{\underset{|}{CH}} - \overset{NO_2}{\underset{|}{CH}} - \overset{O}{\underset{||}{C}} - OH \text{ is}$$

(A) 3-Bromo-2-Nitro butanoic acid
(B) 3-Nitro-2-Bromo butanoic acid
(C) 4-Bromo-3-Nitro butanoic acid
(D) 1-Carboxy-2-Nitro-3-Bromo propane

60. A small drop of liquid is spherical in shape due to
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(D) low density

63241 | XX (P-I)-01 | [32] | (Continued)

| B – SECTION – III |
| SCIENCE (CBZ) |
| BOTANY |

61. Gaseous plant growth regulator is :

   (A) Ethylene

   (B) ABA

   (C) IAA

   (D) Kinetin

62. Auxin is not involved in :

   (A) Enhancing cell division

   (B) Any callus formation

   (C) Inducing dormancy

   (D) Maintenance of apical dominance

63. The ovule of angiosperm is equivalent to :

   (A) Megasporangium

   (B) Megaspore

   (C) Megasporophyll

   (D) Megaspore mother cell

64. In vegetative propagation, cuttings are mostly taken from :

   (A) Shoots of parent

   (B) Roots and stems of parent

   (C) Buds of parent

   (D) Leaves of parent

65. Functional megaspore in an angiosperm develops into :

   (A) Endosperm

   (B) Embryo

   (C) Embryo sac

   (D) Ovule

66. Archegonium is absent in :

   (A) Thallophyta

   (B) Bryophyta

   (C) Pteridophyta

   (D) Gymnosperm

67. In comparison with gametophytes of bryophytes, the gametophytes of angiosperms are :

   (A) smaller and have smaller sex organs

   (B) smaller but have larger sex organs

   (C) larger but have smaller sex organs

   (D) larger and have larger sex organs

68. The plant group having habitat both on land and water is :

(A) Thallophyta

(B) Bryophyta

(C) Tracheophyta

(D) Pteridophyta

69. The system of classification provided by Whittaker is :

(A) Three domain classification

(B) Five kingdom classification

(C) Binomial classification

(D) Artificial classification

70. The size of the stem increases in width due to :

(A) Apical meristem

(B) Intercalary meristem

(C) Lateral meristem

(D) Primary meristem

71. Cell having potential to produce all the differentiated cells of a plant is :

(A) Unipotent

(B) Multipotent

(C) Pluripotent

(D) Totipotent

72. As per Mendelism, yellow wrinkled seeded pea plant crossed to green round seeded one yields F_1 plant with seed characters :

(A) Yellow round

(B) Yellow wrinkled

(C) Green round

(D) Green wrinkled

73. In incomplete dominance 1:2:1 ratio is marked in :

(A) Test cross

(B) F_1 generation

(C) F_2 generation

(D) Reciprocal cross

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74. The agent that causes disease in host by its persistent association is called :

(A) Mycorrhiza

(B) Pathogen

(C) Symbiont

(D) Saprophyte

75. Late blight of potato is caused by :

(A) Alternaria

(B) Pythium

(C) Phytopthora

(D) Erysiphe

76. Endodermis is always absent in :

(A) Monocot root

(B) Dicot root

(C) Monocot stem

(D) Dicot stem

77. The food synthesizing tissue is :

(A) Parenchyma

(B) Collenchyma

(C) Chlorenchyma

(D) Sclerenchyma

78. Hill reaction takes place in chloroplast in the :

(A) Absence of CO_2

(B) Presence of CO_2

(C) Absence of suitable electron acceptor

(D) Presence of suitable electron acceptor

79. Stomata of CAM plants :

(A) are always open

(B) open during the day and close at night

(C) open during the night and close at day

(D) never open

80. To form one molecule of glucose ($C_6H_{12}O_6$) in photosynthesis the number of water molecules required are :

(A) 6

(B) 8

(C) 10

(D) 12

B – SECTION – III

SCIENCE (CBZ)

ZOOLOGY

81. Body tissues obtain O_2 due to dissociation of oxyhaemoglobin under :

(A) Low O_2 conc.

(B) High CO_2 conc.

(C) Low CO_2 conc.

(D) Low O_2 and high CO_2 conc.

82. Which one of the following is correct for aerobic respiration ?

(A) Occurs in the absence of O_2

(B) Ethanol and lactic acids are produced

(C) Releases less energy

(D) The end products are CO_2, H_2O and energy

83. The lymphocytes responsible for cell mediated response of body are :

(A) Neutrophils

(B) B-Lymphocytes

(C) T-Lymphocytes

(D) Monocytes

84. The heart sound "dupp" is produced when :

(A) Tricuspid valve is opened

(B) Mitral valve is opened

(C) Mitral valve is closed

(D) Semilunar valves are closed

85. Podocytes are the cells which are present on :

(A) Neck of nephron

(B) Wall of Bowman's capsule

(C) Outer wall of loop of Henle

(D) Wall of vasa recta

86. The anucleated unicellular organisms of R. H. Whittaker's (1969) classification are included in the kingdom :

(A) Protista

(B) Animalia

(C) Monera

(D) Plantae

87. Which of the following does occur exclusively in meiosis ?

(A) Pairing of homologous chromosomes

(B) Separation of duplicated strand

(C) Cytokinesis

(D) Disappearance of nucleolus

88. All of the following are pyrimidine bases in the nucleotides *except* :

(A) Cytosine

(B) Thymine

(C) Adenine

(D) Uracil

89. Who postulated the chromosomal theory of sex determination ?

(A) Bridges

(B) Goldschmidt

(C) Murray Barr

(D) Carl Correns

90. In which type of chromosomal aberration one arm of chromosome without centromere does undergo 180° rotation ?

(A) Paracentric inversion

(B) Pericentric inversion

(C) Terminal deletion

(D) Intercalary deletion

91. Ornithine cycle is concerned with the biosynthesis of :

(A) Glucose

(B) Urine

(C) Vitamin A

(D) Urea

92. Part of the brain regulating temperature of body is :

(A) Hypothalamus

(B) Pituitary

(C) Medulla

(D) Cerebellum

93. Glucagon is secreted by :

  (A) Acinar cells of Pancreas

  (B) Beta cells of islets of Langerhans

  (C) Adrenal cortex

  (D) Alpha cells of islets of Langerhans

94. The fluid-filled space within the human Graafian follicle is called

  (A) Corpus luteum

  (B) Corpus albicans

  (C) Antrum

  (D) Germ hill

95. The fusion of pronuclei of sperm and ovum is known as :

  (A) Fertilization

  (B) Amphimixis

  (C) Hemixis

  (D) Endomixis

96. Darwin's finches were found in :

  (A) Galapagos islands

  (B) Australia

  (C) Africa

  (D) Siberia

97. Lederberg replica experiment explains :

  (A) Lamarck's theory

  (B) Mutation theory

  (C) Darwin's theory

  (D) Recapitulation theory

98. The concept of ecological pyramids was introduced by :

  (A) Tansley

  (B) Elton

  (C) Odum

  (D) Haeckel

99. Acid rain is due to the increase in atmospheric concentration of :

  (A) Ozone and dust

  (B) CO_2 and CO

  (C) SO_3 and CO

  (D) SO_2 and NO_2

100. The organ of abnormal function of a person passing grey white faecal matter is :

  (A) Kidney

  (B) Liver

  (C) Spleen

  (D) Pancreas

C – SECTION – IV
CHILD DEVELOPMENT, PEDAGOGY, SCHOOL MANAGEMENT & EVALUATION

101. Which of the following is not a guiding principle of NCF-2005 ?

(A) Connecting knowledge to life outside the world

(B) Ensuring that learning shifts from rote method

(C) Making examinations more flexible and interacting than with classroom life

(D) Students need to appear in examinations regularly

102. The results of measurements are always expressed in

(A) Pictures

(B) Directions

(C) Spellings

(D) Numbers

103. For the assessment of learning and behavioural performance at the hands of the peers, which of the following tools may prove quite beneficial ?

(A) Teacher made tests

(B) Intelligence tests

(C) Standardized tests

(D) Questionnaires

104. Process and task of measurement and evaluation in the field of education is governed by which of the following principles ?

(A) Principle of continuity

(B) Principle of totality and comprehensiveness

(C) Principle of selecting appropriate tools of measurement and evaluation

(D) All of these

105. The main objective of diagnostic test is

(A) To find out the nature and causes of the learning problems of students and to formulate a plan for seeing remedial actions

(B) To find out the progress of students after six months of completion of the course

(C) To find out the progress of students after completion of the whole course

(D) To give reward to the students

106. An example of commonly employed qualitative assessment tool is

(A) Intelligence test

(B) Creativity test

(C) Achievement test

(D) Observation

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(Turn over)

107. Which of the following is characteristic of a good test ?

(A) Preparation of the test

(B) Planning the test

(C) Tryout of the test

(D) Validity

108. Days and nights are caused by .... motion of the earth. What kind of question is this ?

(A) Multiple – Choice type

(B) True – False type

(C) Completion type

(D) Matching type

109. Which state is the largest producer of copper in India ? What type of question is this ?

(A) Completion type

(B) Simple recall type

(C) Understanding type

(D) True-False type

110. A test is said to be valid if it measures

(A) What it should not measure

(B) What it ought to measure

(C) What it should plan

(D) How it helps the students

111. MHRD was created in the year

(A) 1947

(B) 1964

(C) 1985

(D) 1971

112. Which of the following is not a leadership skill ?

(A) High communication skill

(B) High relationship skill

(C) High work-organisation skill

(D) High power hankering skill

113. Which of the following is not a function of educational management personnel ?

(A) Mobilising and allocating resources

(B) Designing and developing reform measures

(C) Framing educational objectives and policies

(D) Taking decisions consulting the parents

114. One important function of NCERT is

(A) To guide the students to read regularly

(B) To guide the teachers for better delivery of lessons

(C) To establish Human Resource Development Centres

(D) To disseminate improved educational techniques and practices in schools

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115. University Grants Commission (UGC) was formally established by Government of India by an Act of Parliament in the year
   (A) 1964
   (B) 1956
   (C) 1952
   (D) 1946

116. The author of the book 'Frames of Mind' published in 1983 is
   (A) Guilford
   (B) Vernon
   (C) Howard Gardner
   (D) Torrance

117. The important developmental tasks for different phases in life span have been given by
   (A) Hurlock
   (B) Havighurst
   (C) Piaget
   (D) Skinner

118. Full form of SMDC is
   (A) School Monitoring and Development Committee
   (B) State Monitoring and Development Committee
   (C) School Management and Development Committee
   (D) School Management and Development Council

119. Girls as a group tend to be happier than boys during
   (A) Childhood
   (B) Infancy
   (C) Adulthood
   (D) All of these

120. Gifted children are also called
   (A) Creative children
   (B) Powerful children
   (C) Talented children
   (D) Inferior children

121. "Development means a progressive series of changes that occur as a result of maturation and experience". Who said this ?
   (A) G. W. Allport
   (B) A. Angyal
   (C) J. E. Anderson
   (D) E. B. Hurlock

122. Which of the following statements is true about development ?
   (A) Development is caused by heredity alone
   (B) Development is caused by environment alone
   (C) Development is caused by both heredity and environment
   (D) Development is neither caused by heredity nor by environment

123. "The one word which best characterises adolescence is Change. The change is physiological, sociological and psychological." Who said this ?
   (A) Stanley Hall
   (B) Jean Piaget
   (C) Bigge and Hunt
   (D) Jersild

124. "Hero-worship" is very prominent in which stage of human development ?

  (A) Infancy
  (B) Childhood
  (C) Adolescence
  (D) Adulthood

125. Which of the following is not a need of Adolescents ?

  (A) Need of association with opposite sex
  (B) Need for success
  (C) Desire for new experience
  (D) Need of good pen

126. Which of the following is an advantage of Rubrics ?

  (A) Rubrics as a tool of assessment may be well used as both self-evaluation device or external evaluation device
  (B) Rubrics as a tool of assessment is helpful for teachers' evaluation
  (C) Rubrics as a tool of assessment is helpful for parents' evaluation
  (D) None of these

127. Co-curricular activities are also known as

  (A) Other curricular activities
  (B) Debates and drama activities
  (C) Games and sports activities
  (D) None of these

128. Evaluation is

  (A) Similar with measurement
  (B) More comprehensive than measurement
  (C) Less comprehensive than measurement
  (D) None of these

129. CCE stands for

  (A) Continuous and Competitive Evaluation
  (B) Comprehensive and Continuous Evaluation
  (C) Continuous and Comprehensive Evaluation
  (D) None of these

130. One recent trend in evaluation in school education is

  (A) Monthly test
  (B) Grading
  (C) Annual examination
  (D) Half-yearly examination

131. Which of the following is a step of test construction ?

  (A) Reliability
  (B) Validity
  (C) Planning
  (D) Norms

132. The possibility of biasness of the teacher is most in

  (A) Objective type answers
  (B) Essay type answers
  (C) Short answer type answers
  (D) Fill in the blank type answers

133. The evaluation which is conducted at the end of a course is called .
   (A) Formative evaluation
   (B) Placement evaluation
   (C) Summative evaluation
   (D) Diagnostic evaluation

134. National Curriculum Framework-2005 has been prepared by
   (A) NUEPA
   (B) ICSE
   (C) CBSE
   (D) NCERT

135. In which of the following grading methods grades are provided on the basis of the relative position (ranks) of the students in their class or group ?
   (A) Relative grading method
   (B) Absolute grading method
   (C) Criterion
   (D) None of these

136. A Centrally Sponsored Scheme on school education is
   (A) Model Degree Colleges
   (B) Academic Staff Colleges
   (C) Mid-Day Meal scheme
   (D) Happiness curriculum

137. The stakeholders of education are
   (A) only students
   (B) only parents
   (C) only teachers
   (D) students, parents and teachers

138. An example of physiological motives is
   (A) Food
   (B) Book
   (C) Wealth
   (D) Dress

139. The theory of hierarchical order of needs ranging from physiological needs to self-actualization need was given by
   (A) Bernard
   (B) Atkinson
   (C) Maslow
   (D) Hebb

140. One basic factor influencing learning is
   (A) Friends' guidance
   (B) Birth of the child
   (C) Sex of the child
   (D) Readiness

141. Dyscalculia is associated with
   (A) Difficulty in Arithmetical skills
   (B) Difficulty in reading skills
   (C) Difficulty in writing skills
   (D) Difficulty in English skills

142. Television comes under
   (A) Audio Aid
   (B) Visual Aid
   (C) Audio-Visual Aid
   (D) None of these

143. The language development of the infant begins from
   (A) First smile
   (B) Birth cry
   (C) First feeding
   (D) Calling "Maa"

144. Multilingual education is for

(A) Tribal children

(B) Girls only

(C) Differently abled children only

(D) Weaker children only

145. Which of the following is not a stage of cognitive development according to Piaget ?

(A) The period of sensori motor adaptation

(B) The development of symbolic and perceptual thought

(C) The period of intuitive thought

(D) The period of silent observation

146. Which of the following is not a characteristic of intelligence ?

(A) It is an innate, natural power and not acquired

(B) Power of intelligence differs from individual to individual

(C) Heredity and environment exercise good deal of influence on intelligence

(D) Boys are more intelligent than girls

147. The word "puberty" is derived from the Latin word

(A) Pubertas

(B) Pubert

(C) Puberty

(D) Pub

148. Which of the following conditions influences adolescent's self-concept ?

(A) Food habit

(B) Appearance

(C) Type of vehicle one has

(D) Type of tuition class one attends

149. Which of the following statements is not correct about development ?

(A) Development follows a definite and predictable pattern

(B) Each phase of development has characteristic behaviour

(C) All individuals are different

(D) Nature of development is determined at the time of birth

150. Performance test of intelligence is mostly useful for

(A) Foreigners

(B) Emotionally disturbed children

(C) Poor children

(D) Transgender persons

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