

टेस्ट बुकलेट कोड  
Test Booklet Code

**A1**

समस्या-समाधान आकलन / Problem Solving Assessment

कक्षा - XI / Class - XI

Code No. 0113 P

टेस्ट बुकलेट सं.  
Test Booklet No.

1565665

समय अनुमति : दो घंटे

Time Allowed : Two Hours

इस टेस्ट बुकलेट में 20 पृष्ठ हैं। इस टेस्ट बुकलेट को तब तक न खोलें जब तक आप को ऐसा करने के लिए न कहा जाए।

This Test Booklet contains 20 pages. Do not open this Test Booklet until you are asked to do so.

महत्वपूर्ण निर्देश / Important Instructions :

अधिकतम अंक : 60

Maximum Marks : 60

1. उत्तर पत्रक इस टेस्ट बुकलेट के अंदर है। जब आपको टेस्ट बुकलेट खोलने के लिए निर्देशित किया जाए, तब उत्तर पत्रक बाहर निकालें, और क्षेत्र-1 और क्षेत्र-2 में केवल नीले/काले बॉल पॉइंट पेन से सावधानी से ब्यौरे भरें।

The Answer Sheet is inside this Test Booklet. When you are directed to open the Test Booklet, take out the Answer Sheet and fill in the particulars on Side - 1 and Side - 2 carefully with blue/black ball point pen only.

2. इस टेस्ट बुकलेट के लिए टेस्ट बुकलेट कोड **A1** है। सावधानी से यह जाँच कर लें कि टेस्ट बुकलेट कोड जो उत्तर पत्रक के क्षेत्र - 2 में मुद्रित है वही टेस्ट बुकलेट पर भी मुद्रित है। विसंगति के मामले में, विद्यार्थी तुरंत दोनों, टेस्ट बुकलेट और उत्तर पत्रक को बदलने के लिए निरीक्षक को बताएँ।

The Test Booklet Code for this Test Booklet is **A1**. The candidate should check carefully that the Test Booklet Code printed on Side - 2 of the Answer Sheet is the same as printed on Test Booklet. In case of discrepancy, the candidate should immediately report the matter to the invigilator for replacement of both the Test Booklet and the Answer Sheet.

3. टेस्ट बुकलेट में 60 प्रश्न हैं जो ए, बी और सी तीन वर्गों में विभाजित हैं। विद्यार्थियों को तीन वर्गों के सभी प्रश्न करना अनिवार्य है। वर्ग ए में 24 प्रश्न, वर्ग बी में 18 प्रश्न और वर्ग सी में 18 प्रश्न हैं।

वर्ग ए : भाषीय आचार (प्रश्न सं. 1 से 24) ये प्रश्न या तो हिन्दी भाषा या अंग्रेजी भाषा से करने होंगे, वर्ग बी : गुणात्मक तर्क (प्रश्न सं. 25 से 42), वर्ग सी : मात्रात्मक तर्क (प्रश्न सं. 43 से 60)

The Test Booklet contains 60 questions divided into three Sections A, B and C. A candidate is required to attempt all the three Sections. There are 24 questions in Section A, 18 questions in Section B and 18 questions in Section C.

Section A : Language Conventions (Questions 1 to 24) To be attempted either from English Language or from Hindi Language  
Section B : Qualitative Reasoning (Questions 25 to 42), Section C : Quantitative Reasoning (Questions 43 to 60)

4. सभी तीन वर्गों में बहुविकल्पी प्रश्न (MCQs) हैं। इन प्रश्नों में से कुछ अनुच्छेद आधारित बहुविकल्पी (MCQs) प्रश्न हैं जबकि दूसरे सिर्फ बहुविकल्पी प्रश्न (MCQs) हैं। इनमें से प्रत्येक प्रश्न के चार विकल्प हैं, जिनमें से केवल एक विकल्प सही है। विद्यार्थी को एक सही विकल्प का चयन करना है और तत्संबंधी संख्या उत्तर पत्रक में प्रश्न के सामने भरनी है।

All the three Sections contain Multiple Choice Questions (MCQs). Some of these questions are passage based MCQs whereas others are stand alone MCQs. Each of these questions has four options out of which only ONE option is correct. A candidate has to select the correct option and fill the corresponding number in the Answer Sheet against the question.

5. प्रत्येक प्रश्न एक अंक का है। प्रत्येक सही उत्तर के लिए विद्यार्थियों को एक अंक मिलेगा। किसी भी प्रश्न के लिए ऋणात्मक मूल्यांकन नहीं किया जाएगा और अनुत्तरीत प्रश्नों के लिए कोई अंक नहीं मिलेगा।

Each Question carries one mark. For each correct response, the candidate will get one mark. There is no negative marking for any of the questions and unattempted question earns no mark.

6. परीक्षा के पूरा होने पर, विद्यार्थियों द्वारा उत्तर पत्रक, कक्ष / हॉल में उपस्थित निरीक्षक को सौंपना आवश्यक है। विद्यार्थियों को यह टेस्ट बुकलेट साथ ले जाने की अनुमति है।

On completion of the test, the candidates MUST HAND OVER THE ANSWER SHEET TO THE INVIGILATOR in the room/hall. The candidates are allowed to take away this Test Booklet with them.

7. विद्यार्थियों को अपने उत्तर पत्रक उपस्थित निरीक्षक को सौंपे बिना और उपस्थिति पत्रक पर हस्ताक्षर किए बिना परीक्षा कक्ष नहीं छोड़ना है। यदि विद्यार्थी ने उपस्थिति पत्रक पर हस्ताक्षर नहीं किए हैं या उत्तर पत्रक निरीक्षक को नहीं सौंपा है, तो ऐसे मामलों को अनुचित साधनों के प्रयोग के अंतर्गत मानकर कार्यवाही की जाएगी।

The candidates should not leave the Examination Hall without handing over their Answer Sheet to the Invigilator on duty and sign the Attendance Sheet. Cases where a candidate has not signed the Attendance Sheet or the Answer Sheet has not been handed over to the Invigilator shall be dealt as an Unfair means case.

8. इस पृष्ठ पर विवरण लिखने और उत्तर पत्रक पर लिखने या उत्तरों को अंकित करने के लिए केवल नीले / काले बॉल पॉइंट पेन का ही उपयोग करें।

Use blue/black ball point pen only for writing particulars on this page and writing or marking responses on Answer Sheet.

9. विद्यार्थियों को यह सुनिश्चित करना चाहिए कि उत्तर पत्रक मुड़ा हुआ या क्षतिग्रस्त न हो। उत्तर पत्रक पर कोई भी अतिरिक्त निशान न बनाएं।

The candidates should ensure that the Answer Sheet is not folded or damaged. Do not make any stray marks on the Answer Sheet.

10. विद्यार्थी परीक्षा कक्ष में अपने आचरण के संबंध में बोर्ड द्वारा संचालित सभी नियमों और विनियमों से शासित रहेंगे। अनुचित साधनों से सम्बन्धित सभी मामलों का निपटारा बोर्ड के नियमों एवं विनियमों द्वारा होगा।

The candidates are governed by all Rules and Regulations of the Board with regard to their conduct in the Examination Hall. All cases of unfair means will be dealt with as per Rules and Regulations of the Board.

पंजीकरण संख्या/Registration No. : \_\_\_\_\_

विद्यार्थी का नाम/Candidate's Name : \_\_\_\_\_

विद्यार्थी के हस्ताक्षर /Candidate's Signature : \_\_\_\_\_

निरीक्षक के हस्ताक्षर/Invigilator's Signature \_\_\_\_\_





## वर्ग - ए (भाषीय आचार : प्रश्न 1 से 24)

### परीक्षार्थियों के लिए निर्देश :

1. यह खण्ड उन विद्यार्थियों के लिए है जो भाषीय आचार (Language Conventions) खण्ड के अन्तर्गत हिन्दी विषय में परीक्षा देना चाहते हैं।
2. इस खण्ड में कुल 24 वस्तुनिष्ठ प्रश्न हैं। सभी प्रश्न अनिवार्य हैं तथा प्रत्येक प्रश्न एक अंक का है।
3. सभी उत्तर केवल OMR उत्तर पत्र पर ही अंकित करें। उत्तर बदलने हेतु श्वेत रंजक का प्रयोग निषिद्ध है।

### निर्देश : निम्नलिखित प्रश्न संख्या 1 से 8 में सबसे सही विकल्प चुनिए :

1. 'सोनाक्षी अत्यंत परिश्रमी है।' वाक्य में रेखांकित शब्द है
  - (1) विशेषण
  - (2) संज्ञा
  - (3) प्रविशेषण
  - (4) क्रियाविशेषण
2. इस बारिश में कहाँ जाओगे ? वाक्य में रेखांकित शब्द है
  - (1) प्रश्नवाचक सर्वनाम
  - (2) स्थानवाचक क्रियाविशेषण
  - (3) अनिश्चयवाचक सर्वनाम
  - (4) समयवाचक क्रियाविशेषण
3. कौन-सा वाक्य संयुक्त क्रिया का उदाहरण है ?
  - (1) बच्चे जोर से चिल्लाए।
  - (2) रीमा ने खाना बनाया।
  - (3) मोहन को भूख लगी है।
  - (4) आग देखकर दर्शक चिल्ला उठे।
4. 'सुहासिनी ने खाना खाया और रेखा ने कॉफी पी।' वाक्य में रेखांकित शब्द है
  - (1) संबंधबोधक
  - (2) निपात
  - (3) समुच्चयबोधक
  - (4) क्रियाविशेषण

### 5. मिश्रित वाक्य का उदाहरण है

- (1) सदफ की वह कमीज़ फट गई जो नई थी।
- (2) सदफ की नई वाली कमीज़ फट गई।
- (3) सदफ की कमीज़ फट गई।
- (4) सदफ की नई कमीज़ फट गई।

### 6. कौन-सा शब्द-युग्म बाकी शब्द-युग्मों से भिन्न है ?

- (1) चाय - वाय
- (2) पापड - वापड
- (3) घर - घर
- (4) पूँछ - वूँछ

### 7. 'सुमन को दाल - चावल दे दीजिए।' वाक्य के रेखांकित अंश में कौन सा कारक है ?

- (1) कर्म
- (2) संप्रदान
- (3) अपादान
- (4) कर्ता

### 8. 'महाराणा प्रताप वीर थे तो लक्ष्मीबाई \_\_\_\_\_ थी।' वाक्य के रेखांकित शब्द के विपरीत लिंग वाले शब्द से वाक्य पूरा कीजिए।

- (1) वीरनी
- (2) विदुषी
- (3) वीरां
- (4) वीरांगना





निर्देश - निम्नलिखित प्रश्न 9 से 16 में सबसे उचित विकल्प का चयन कीजिए :

9. वह एक कटोरी में गंगा \_\_\_\_\_ ले आया।  
 (1) पानी  
 (2) जल  
 (3) नीर  
 (4) पान
10. 'बस इतना-सा ! मैं तो हैरान हूँ।' वाक्य में रेखांकित अंश \_\_\_\_\_ अर्थ की ओर संकेत करता है।  
 (1) अपर्याप्तता के  
 (2) पर्याप्त होने के  
 (3) खराब होने के  
 (4) विकट होने के
11. सभी सत्याग्रही पूरे \_\_\_\_\_ देशभक्ति के गीत गा रहे थे।  
 (1) तन्मयता के साथ  
 (2) मजे के साथ  
 (3) जोश के साथ  
 (4) तेज़ी के साथ
12. "उस पर बिलकुल भरोसा मत करना। वह तो \_\_\_\_\_।"  
 (1) आस्तीन का साँप है।  
 (2) अंधे की लाठी है।  
 (3) तीन का तेरह है।  
 (4) गुदड़ी का लाल है।

13. 'अपराधी को मृत्युदंड \_\_\_\_\_।' की सजा दी गई।  
 (1) दिया गया।  
 (2) सुनाई गई।  
 (3) की सजा हुई।
14. वह उचित-अनुचित का विचार किए बिना व्यवहार करता है। इसे कहते हैं  
 (1) एक समान भाव से कार्य करना  
 (2) अंधो में काना राजा  
 (3) आँखों में धूल झोंकना  
 (4) एक लाठी से हाँकना
15. यह तो दुष्प्राप्य वस्तु है। वाक्य में रेखांकित शब्द का अर्थ है  
 (1) जो बहुत कीमती होती है  
 (2) जो बहुत कठिनाई से मिलती है  
 (3) जो बहुत दुर्गम होती है  
 (4) जो बिलकुल नहीं मिलती
16. रमाकांत ने हमेशा अपने लोगों को ही फायदा पहुँचाया है। इसे कहते हैं  
 (1) आँख का अंधा  
 (2) न तीन में न तेरह में  
 (3) अंधा बाँटे रेवडी फिर-फिर अपनों को दे  
 (4) एक अनार सौ बीमार





निर्देश-नीचे दिए गए अनुच्छेद को पढ़कर प्रश्न संख्या 17 से 24 में उचित विकल्प का चयन कीजिए :

गाँधीजी बड़ी नपी-तुली 17 में अपनी बात कहते 18। वे लच्छेदार शब्दों के 19 कभी नहीं जाते थे। 20 उद्देश्य लोगों को चमत्कृत 21 नहीं, उनसे अपने दिल 22 बात कहना था। उनकी 23 सीधी-सादी किंतु निराली 24 थी जिसमें वे अपने हृदय को उड़ेलकर रख देते थे।

17. रिक्त स्थान 17 पर क्या आयेगा ?

- (1) तरीके
- (2) बोली
- (3) भाषा
- (4) सादगी

18. रिक्त स्थान 18 पर क्या आयेगा ?

- (1) थे
- (2) रहते
- (3) हैं
- (4) जाते

19. रिक्त स्थान 19 पर क्या आयेगा ?

- (1) आड़े
- (2) पीछे
- (3) चक्कर
- (4) फेर

20. रिक्त स्थान 20 पर क्या आयेगा ?

- (1) उसका
- (2) उनके
- (3) अपने
- (4) उनका

21. रिक्त स्थान 21 पर क्या आयेगा ?

- (1) ठहराना
- (2) दिखाना
- (3) करना
- (4) बताना

22. रिक्त स्थान 22 पर क्या आयेगा ?

- (1) की
- (2) में
- (3) सी
- (4) वाली

23. रिक्त स्थान 23 पर क्या आयेगा ?

- (1) बात
- (2) एक
- (3) भाषा
- (4) सदैव

24. रिक्त स्थान 24 पर क्या आयेगा ?

- (1) बोली
- (2) प्रस्तुति
- (3) बात
- (4) शैली



**Section – A (Language Conventions : Questions 1 to 24)**

**Note :** This Section of the question paper contains 24 questions in the English Language. A student is required to attempt all the 24 questions.

**(Questions 1 to 8) : Read the following passage carefully and select the most suitable option from each list according to the corresponding number in the passage.**

1. Many teens are accused of being lazy by their parents, as
  2. they often sleep late into the morning and find it hard to
  3. function upon first waking. These same teens are often also
  4. reprimanded for staying up late on school nights.
  5. However scientific research has shown that addlescents
  6. have a very different sleeping pattern to adults.
  7. The chemical Melatonin, which is in charge of
  8. inducing sleep, is released later in the day by teenage bodies
  9. than it is for adults. This means it can be quite hard for
  10. teens to go to sleep early. It also may mean that teens now
  11. have a scientific excuse to sleep in late!
- 
1. Which of the following words shows the correct spelling of the underlined, misspelt word in line 5 ?
    - (1) addlescents
    - (2) adolescents
    - (3) adolessents
    - (4) adulescents
  2. In line 1, the words 'accused of' could best be replaced with
    - (1) blamed for
    - (2) criticised as
    - (3) described as
    - (4) nagged about
  3. In line 3, the word 'function' could best be replaced with
    - (1) work
    - (2) serve
    - (3) behave
    - (4) operate
  4. In line 4, the words 'reprimanded for' could best be replaced with
    - (1) punished for
    - (2) disciplined for
    - (3) spoken to about
    - (4) cautioned about
  5. In line 7, the words 'in charge of' could best be replaced with
    - (1) guilty of
    - (2) created by
    - (3) incapable of
    - (4) responsible for
  6. In line 8, the word 'inducing' could best be replaced with
    - (1) forcing
    - (2) persuading
    - (3) transmitting
    - (4) encouraging
  7. In line 11, the word 'excuse' could best be replaced with
    - (1) alibi
    - (2) reason
    - (3) pardon
    - (4) apology
  8. Which of the following words is the **opposite** in meaning to the word 'released' as used in line 8 ?
    - (1) withheld
    - (2) liberated
    - (3) constricted
    - (4) constrained





(Questions 9 – 12) : Complete this passage by selecting the most suitable word/phrase from each list to fill the corresponding gap.

I peered at the river through a gap in the roots of the strangler fig. The thick branches of the tree 9 me without really protecting me. I noticed the gentlest of ripples in the water and then something 10 began to emerge from its depths. An enormous head upon a slender neck rose above the surface. I looked into the beast's cold, reptilian eyes. I could sense no mind or soul behind them. I had to refrain from letting out a frightened 11 ! The time for retreating into the depths of the forest had arrived and I knew that it was 12.

9. Which of these fits gap 9 ?

- (1) hiding
- (2) hidden
- (3) was hiding
- (4) were hiding

10. Which of these fits gap 10 ?

- (1) frightening yet scary
- (2) wonderful yet grand
- (3) amazing yet astonishing
- (4) magnificent yet terrifying

11. Which of these fits gap 11 ?

- (1) "Aah!"
- (2) "Aha!"
- (3) "Ouch!"
- (4) "Phew!"

12. Which of these fits gap 12 ?

- (1) either now or never
- (2) neither now nor never
- (3) neither sooner nor later
- (4) either sooner rather than later

(Questions 13 – 16) : Read the passage and select the correct form of the missing word/phrase to complete it.

It 13 that a person's body is intuitively aware of when it has returned to its country of origin and 14, as I stood on the land of my birth, I could certainly vouch for this being true. The sense of calm that 15 my body surprised me given that the bad news I had recently received 16 enough to suppress any feelings of being at peace with the world.

13. Which of these fits gap 13 ?

- (1) is been said
- (2) has often said
- (3) is often been said
- (4) has often been said

14. Which of these fits gap 14 ?

- (1) after all
- (2) in addition
- (3) at that moment
- (4) on the other hand

15. Which of these fits gap 15 ?

- (1) overcome
- (2) had overcome
- (3) will overcome
- (4) would overcome

16. Which of these fits gap 16 ?

- (1) will be
- (2) shall be
- (3) might have been
- (4) should have been





(Questions 17–20) : Complete this passage by selecting the most suitable word/phrase from each list to fill the corresponding gap.

Experienced climber Aron Ralston set out on a 17 hiking adventure, which proved to be a 18 event. Despite it being a common safety practice amongst climbers to inform others when undertaking unaccompanied hiking trips, Aron had not 19 anyone of his plans. During his climbing adventure Aron's right arm became pinned against the canyon wall by a 360kg boulder. Aron was unable to free himself, and after six days of being 20 he made the decision to break the bones in his forearm and then amputate his arm below the elbow. Once free he made his way down a cliff and walked 8km to seek assistance. Aron survived.

17. Which of these fits gap 17 ?

- (1) solo
- (2) team
- (3) shared
- (4) supervised

18. Which of these fits gap 18 ?

- (1) fail-safe
- (2) stimulating
- (3) life-changing
- (4) breath-taking

19. Which of these fits gap 19 ?

- (1) alerted
- (2) signalled
- (3) cautioned
- (4) authorised

20. Which of these fits gap 20 ?

- (1) captive
- (2) trapped
- (3) entangled
- (4) suppressed

(Questions 21–24) : Complete this passage by selecting the most suitable word/phrase from each list to fill the corresponding gap.

At 7.17 am on June 30, 1908, an explosion erupted in the forests of Siberia, Russia. The massive explosion 21 shockwaves on barometers as far away as England. A 22 number of trees – eighty million to be precise – were flattened and lay in a radial pattern. The trees that remained standing 23 telegraph poles as they had been stripped of their limbs and bark. This explosion is 24 as the "Tunguska event", and it is generally accepted that this was the result of a cosmic body, such as a meteorite, impacting with the Earth.

21. Which of these fits gap 21 ?

- (1) listed
- (2) registered
- (3) expressed
- (4) presented

22. Which of these fits gap 22 ?

- (1) fantastic
- (2) dramatic
- (3) powerful
- (4) remarkable

23. Which of these fits gap 23 ?

- (1) featured
- (2) resembled
- (3) surrounded
- (4) represented

24. Which of these fits gap 24 ?

- (1) declared
- (2) indicated
- (3) referred to
- (4) accounted for





## Section – B (Qualitative Reasoning : Questions 25 to 42)

25. Aamir wants to buy ink cartridges for his printer from a website but is not sure which site is most trustworthy.

Which of the following factors is **least** important in making a decision about this matter ?

- (1) The site's money-back offer.
- (2) The wide range of brands being sold.
- (3) The guaranteed time it takes for delivery.
- (4) The number of sales made by the website.

26. Kavi : "Well, it looks like I have to do all the organising yet again. You people are lazy and hopeless."

Sachi: "Since I am the only one here, I can't help feeling upset that you are saying that about me. I believe that I do my share of work, but if you disagree, I will listen to your reasons."

In this conversation, Sachi expresses himself

- (1) passively
- (2) assertively
- (3) sarcastically
- (4) aggressively

27. An idiom is a common saying which means something different from what it says. An idiom has a deeper meaning.

Which of the four options provides the actual meaning of the following idiom ?

*'He killed two birds with one stone'.*

- (1) He hit a target twice using stones.
- (2) He did more than one thing at a time.
- (3) He completed two tasks with one action.
- (4) He couldn't save the food crops from pests and birds.

28. Human history extends a short way into the past.

Compared to this, the period from the formation of the Earth until the first humans is like \_\_\_\_

Which of these best completes the passage above ?

- (1) a sphere floating in space.
- (2) an unstoppable river in flood.
- (3) the submerged bulk of an iceberg.
- (4) a wind that blows events like dust.

29. A tautology occurs when unnecessary words are used. This generally occurs when someone tries to improve a description or clarify what is meant.

"Past history" is a tautology because the word '*past*' is not required. History – by definition – is an account of the past.

Which of the following sentences contains a tautology ?

- (1) He nearly missed the ball.
- (2) She saw clearly for the first time.
- (3) The peg fitted loosely into the hole.
- (4) They were completely surrounded.

30. Whenever a writer includes words or comments which are based on a personal opinion rather than a known fact, they are showing their bias towards an issue. Bias can be negative or positive.

Which word in the following passage shows a positive bias?

"Indira shines in this movie about a young girl trying to escape from her bullying classmates. The fear, heartbreak, and sadness, felt by children in such situations, are explained through the choice of music and the close-ups of facial expressions."

- (1) trying
- (2) shines
- (3) escape
- (4) sadness





**Questions (31 – 36) : Read the following passage and answer the questions that follow:**

Since 2006, commercial colonies of bees used to make honey and pollinate crops have been collapsing. The loss of bees is a major threat to agriculture. The use of industrial scale methods in agriculture seems to be one of the main causes of the crisis. Meanwhile, wild bee species are also collapsing due to the destruction of their habitats. These bees also play a vital role in pollinating crops and plants generally.

According to scientists, bees pollinate more than 70% of the crop species that supply 90% of the world's food. Given that the world's population is rapidly growing, more bees are needed to pollinate food crops. Scientists are calling for significant changes to how humans manage the planet so that honeybees survive and the world's food sources are protected.

Scientists worldwide are joining forces to pressure governments to implement measures to restore bee populations. The strategies being proposed include incentives that encourage farmers and landowners to restore habitats that are friendly to pollinators, stringent controls on chemical use and manufacture, and stricter quarantine measures between countries.

The collapse of honeybee colonies is a worldwide phenomena and this collapse is likely to continue \_\_\_\_\_.

31. Which of these options would best complete the concluding sentence of this information text ?
- (1) because scientists are not being supported.
  - (2) while companies focus on long term profits.
  - (3) unless an international approach is taken on this issue.
  - (4) if the world's population continues to grow at a rapid rate.
32. The main idea of the first paragraph is that
- (1) bees are disappearing.
  - (2) commercial interests are at risk.
  - (3) world food supplies are decreasing.
  - (4) the agricultural industry is under threat.
33. A key factor affecting wild bees is
- (1) bee raising practices.
  - (2) environmental degradation.
  - (3) industrial scale agricultural methods.
  - (4) inability to pollinate crops and plants.
34. According to the text, what is the scientists' main concern ?
- (1) human survival
  - (2) gathering additional scientific evidence
  - (3) lack of variety in large scale farming methods
  - (4) safeguarding bee populations and food supplies



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35. Which one of the following strategies are scientists involved in ?

- (1) encouraging a global approach
- (2) expanding crop planting and harvesting
- (3) changing how humans manage the planet
- (4) breeding programs to increase bee numbers

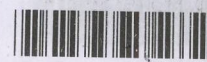
36. "Stricter quarantine measures between countries" are being proposed to

- (1) persuade countries to work together.
- (2) assist crop sharing between countries.
- (3) prevent countries' misuse of chemicals.
- (4) combat contamination across countries.

**Questions (37 – 42) : Read the following passage and answer the questions that follow :**

Following the end of World War 1, France, Britain, USA, Japan and Italy, met in Paris to develop a plan for the future based on peace and justice. Although these nations appeared to support this goal, most had different motives. The European leaders (who blamed Germany for causing the war) wanted a financial payment and German lands from the Germans in return for their wartime losses. In contrast, the American President, Woodrow Wilson, promoted the need to establish global peace and justice and in doing so received worldwide praise and support.

A1



The European leaders got what they wanted through the signing of the Treaty of Versailles in 1919 and Woodrow Wilson's efforts led to the writing of the Covenant for The League of Nations in the same year.

The widespread support that Wilson received resulted in 42 countries, including India, joining The League of Nations in the belief that a global organisation of nations could maintain peace and prevent a repetition of the horrors of the First World War.

Although it had many successes, once the Second World War broke out it became obvious that the League of Nations was not as powerful as was first thought and that changes were needed. Nevertheless its goals and ideals were sound and these provided the basis for the formation of the modern day United Nations which currently has 193 member states.

37. Based on the information above, what goals did the European leaders appear to support ?

- (1) honesty and equality
- (2) harmony and fairness
- (3) growth and responsibility
- (4) independence and legality





38. Which word best describes the European leaders' goal?
- (1) amends
  - (2) revenge
  - (3) retribution
  - (4) compensation
39. The text suggests that Woodrow Wilson
- (1) sought praise following the war.
  - (2) felt differently from the European leaders.
  - (3) thought that being friendly was important.
  - (4) felt that Germany needed a second chance.
40. The text suggests that members of the League of Nations believed that
- (1) only European nations should join.
  - (2) peace between nations was important.
  - (3) Germany should pay to become a member.
  - (4) President Wilson could prevent another world war.
41. When was the League of Nations formed?
- (1) when the countries met in Paris
  - (2) when the Treaty of Versailles was signed
  - (3) before the European leaders met to claim money and land from Germany
  - (4) following President Wilson's campaign for peace and justice for all countries
42. "Although it had many successes ....."
- What does 'it' refer to in the first sentence of last paragraph?
- (1) India
  - (2) United Nations
  - (3) League of Nations
  - (4) The Second World War



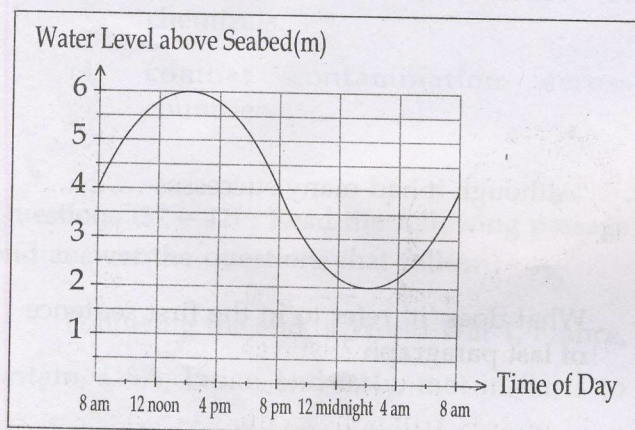


## Section – C (Quantitative Reasoning : Questions 43 to 60)

43. In a car park, there are 2 white cars for every 3 blue cars and for every 2 blue cars there are 5 silver cars. What is the least number of cars in the car park ?

(1) 12  
(2) 25  
(3) 31  
(4) 50

44. To enter a harbour, the captain of a ship needs the water to be at least 5 metres deep. The tide chart is shown below.



If the ship was to enter and leave the harbour on the same day, what would be the approximate maximum number of hours that it could remain in port ?

(1) 2  
(2) 6  
(3) 8  
(4) 12

45. Sana wants to buy 19 balloons for a party.

Of these

- most balloons need to be red.
- 11 need to be blue or yellow.
- at least one needs to be pink.

How many pink balloons can Sana buy?

(1) 4  
(2) 3  
(3) 2  
(4) 1

46. In a 100 page book, pages 2 and 3 face each other. Similarly, pages 4 and 5 and 6 and 7 face each other. This pattern is repeated to the end of the book.

The sum of two facing pages could be

(1) 90  
(2) 95  
(3) 97  
(4) 99

47. Disha measures the length of a classroom with 20 of her paces.

Anuj measures the length of the same classroom with 25 of his paces.

Which one of these statements is true?

- (1) Disha's pace is 80% of Anuj's pace.  
(2) Disha's pace is 120% of Anuj's pace.  
(3) Disha's pace is 125% of Anuj's pace.  
(4) Disha's 10 paces are the same length as Anuj's 15 paces.





48. Fadi's teacher scores each student's final mark according to the given table.

For his assignments, Fadi received a mark of 80.

His final marks were 72.

Assessment	Assignments	Tests
Weightage	20%	80%

What marks did he get for his tests ?

- (1) 56
- (2) 64
- (3) 70
- (4) 88

49. Part of India's new tax scale is shown below.

Taxable Income	Tax Rate
Up to ₹ 2,00,000	Nil
₹ 2,00,001 to ₹ 5,00,000	₹ 0 + 10% of income above ₹ 2,00,000
₹ 5,00,001 to ₹ 10,00,000	₹ 30,000 + 20% of income above ₹ 5,00,000
Above ₹ 10,00,000	₹ 1,30,000 + 30% of income above ₹ 10,00,000

Anshu pays ₹ 20,000 more tax than Batuk.

If Anshu earns ₹ 5,00,000 in that financial year, how much does Batuk earn ?

- (1) ₹ 1,00,000
- (2) ₹ 2,00,000
- (3) ₹ 3,00,000
- (4) ₹ 4,00,000

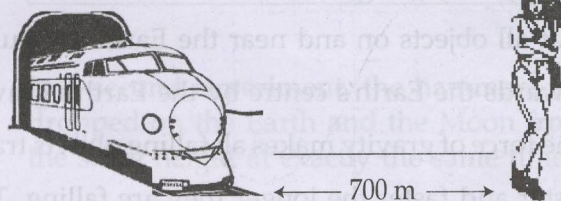
50. Lockers for storing small items are found in some schools. The lockers in a school were numbered 1 to 100.

These were all opened for cleaning. Manoj came past and closed every 5<sup>th</sup> locker. Arvi then came past and closed every even numbered locker that was open, and opened every even numbered locker that Manoj had closed.

How many lockers were left open after Manoj and Arvi had both gone past ?

- (1) 10
- (2) 40
- (3) 50
- (4) 60

- 51.



This train blew its whistle as it came out of the tunnel. Fathima, who was standing 700 metres from the tunnel beside the straight railway line, heard it. The speed of the sound was 350 m/sec. Eighteen seconds after Fathima heard the whistle, the train reached the point at which she was standing beside the track. What was the train's average speed over that 700 metre railway line ?

- (1) 2 m/s
- (2) 35 m/s
- (3) 37 m/s
- (4) 44 m/s





52. A small area can be covered by 20 identical square tiles or 9 identical rectangular tiles. The length of the side of each square tile is a whole number, and this is 2 cm shorter than the longer side of each rectangular tile.

What is the length of the shorter side of the rectangular tile ?

- (1) 1 cm
- (2) 3 cm
- (3) 4 cm
- (4) 5 cm

**Questions (53–56) : Read the following passage and answer the questions that follow :**

Everyone knows the expression *what goes up, must come down* but have you ever wondered exactly why things must come down ? The fact is that all objects on and near the Earth are pulled towards the Earth's centre by the Earth's gravity. The force of gravity makes all falling objects travel faster and faster the longer they are falling. This is called gravitational acceleration. On Earth, the speed of a dropped object progressively increases by about 9.8 m/s for every second that it falls. This is just like what happens to a car's speed as it accelerates away from a stop sign. A dropped hammer will have a speed of 9.8 m/s after its first second of travel, a speed of 19.6 m/s after two seconds and so on.

Other large masses such as the Moon, the Sun and other planets also have gravity, although it may be stronger or weaker than on Earth. The

gravity that an object experiences on a planet's surface is directly proportional to the planet's mass and inversely proportional to the planet's radius squared. So, a planet that has the same radius as the Earth (6400 km) but has twice the mass will have gravity that is twice as strong as the Earth's. A planet that has the same mass as the Earth ( $6 \times 10^{24}$  kg) but twice the radius will have gravity that is four times weaker than Earth's.

The Moon's gravity, for example, is one-sixth that of the Earth's. A hammer dropped on the Moon will fall much more slowly there than it would on the Earth – it would increase in speed by only 1.6 m/s every second that it fell. On Jupiter, where gravity is two and a half times greater than on Earth, the hammer would fall more quickly, increasing its speed by 24.5 m/s every second it fell.

53. A rock is dropped on a planet that has the same mass as the Earth. Its speed increases by 1.09 m/s every second that it falls.

Which of the following statements is true ?

- (1) The planet's radius is 3 times larger than the Earth's radius.
- (2) The planet's radius is 3 times smaller than the Earth's radius.
- (3) The planet has a radius 9 times larger than the Earth's radius.
- (4) The planet has a radius 9 times smaller than the Earth's radius.

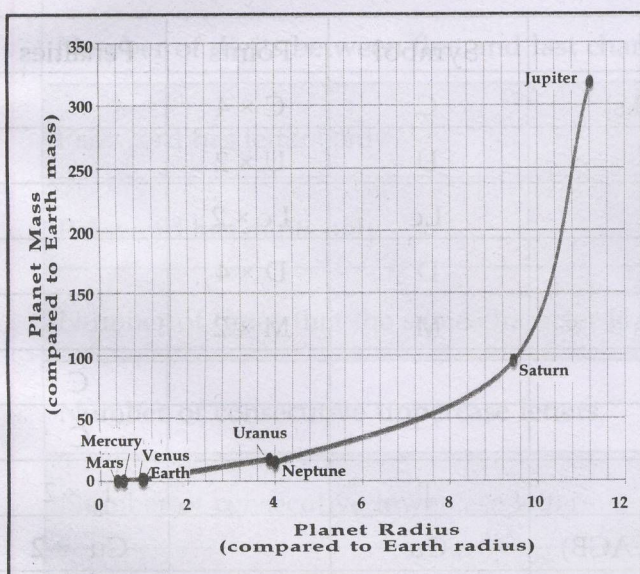




54. Mars has one-tenth of the Earth's mass and a radius that is one-half of the Earth's radius. Therefore, the value of Mars gravity divided by Earth gravity will be

- (1) 0.2
- (2) 0.4
- (3) 5.0
- (4) 2.5

55. The graph below indicates the mass of the planets in our solar system against their radius.



Which one of the following planets has gravity that is half that of Jupiter's gravity?

- (1) Earth
- (2) Saturn
- (3) Neptune
- (4) Mercury

56. Identical hammers are dropped on the moon and on the Earth. At the end of each second that the hammers fall, the falling speed of each hammer is measured. The results for the first 5 seconds are shown in the table.

Time after release (seconds)	Speed (metres/second)	
	On Earth	On Moon
0	0.0	0.0
1	9.8	1.6
2	19.6	3.2
3	29.4	4.8
4	39.2	6.4
5	49.0	8.0

In a second experiment, the hammers are dropped on the Earth and the Moon from the same height at exactly the same time.

The Earth hammer was travelling at a speed of 68.6 m/s when it hit the ground.

Which of the following is the nearest to the speed of the Moon hammer when the Earth hammer strikes the ground?

- (1) 4 m/s
- (2) 6 m/s
- (3) 11 m/s
- (4) 12 m/s





**Questions (57 – 60) : Read the following passage and answer the questions that follow:**

Passwords – literally words that had to be spoken to a guard in order to be allowed to pass – have been used since ancient times to keep people, areas, and ideas secure. In the modern world, the passwords that we enter into computers protect our bank accounts and identities. A password that is easy for someone else to guess is said to be “weak”. Many websites help us keep our information secure by advising us of our password’s strength rating (weak, moderate, strong or very strong) as we enter it. This rating is determined by an automatic scoring system. A password’s security score depends on how many characters are used, the type of character, and the order in which the characters are arranged. Some of these aspects are considered favourable and attract points, while others attract penalties. Each of these aspects needs to be considered independently. The final score is calculated by subtracting the penalties from the points gained.

The following table shows a typical password scoring system :

Aspects which need to be considered	Symbol	Points	Penalties
Number of characters (includes punctuation marks)	C	$C \times 4$	
Number of uppercase letters	U	$U \times 2$	
Number of lowercase letters	Lc	$Lc \times 2$	
Number of digits (numbers)	D	$D \times 4$	
Number of digits between first and last characters	M	$M \times 2$	
Password has letters only			C
Password has digits only			C
Number of times that the same character is used	T		$T \times 2$
Number of consecutive uppercase letters (e.g. PLA, AGB)	Cu		$Cu \times 2$
Number of consecutive lowercase letters (e.g. way, xe)	Cl		$Cl \times 2$
Number of sequential letters (e.g. abc, EFGH)	S		$S \times 2$
Number of sequential digits (e.g. 2,3,4,5)	Sd		$Sd \times 2$
Points/Penalties			
Final score			

Score	29 or less	30 - 59	60 - 79	80 or more
Strength	weak	moderate	strong	very strong





The following example shows how the password DOG123 would be scored.

(Note: The aspects that don't apply to this password have been shaded)

Aspects which need to be considered	Points	Penalties
Number of characters	$C \times 4 = 6 \times 4 = 24$	
Number of uppercase letters	$U \times 2 = 3 \times 2 = 6$	
Number of lowercase letters		
Number of digits (numbers)	$D \times 4 = 3 \times 4 = 12$	
Number of digits between first and last characters	$M \times 2 = 2 \times 2 = 4$	
Password has letters only		
Password has digits only		
Number of times that the same character is used		
Number of consecutive uppercase letters		$Cu \times 2 = 3 \times 2 = 6$
Number of consecutive lowercase letters		
Number of sequential letters		
Number of sequential digits		$Sd \times 2 = 3 \times 2 = 6$
Points/Penalties	46	12
Final score	$46 - 12 = 34$	

A final score of 34 means that DOG123 has a "moderate" strength rating in this scoring system.



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57. Veera wants to use veera2 as a password.

What is the security score for this password ?

- (1) 22
- (2) 24
- (3) 34
- (4) 38

58. A password is made up of 10 sequential, uppercase letters.

e.g. ABCDEFGHIJ

What is the highest security rating that this password can have ?

- (1) weak
- (2) moderate
- (3) strong
- (4) very strong

59. Rohith wants to use a 6-character password made up of identical characters.

Which of the following passwords would give him the highest security score ?

- (1) 555555
- (2) rrrrrr
- (3) RRRRRR
- (4) ??????

60. Supipi created a 6 character password made up of letters and numbers only. A week later, she recalls the first 5 characters but has forgotten the 6<sup>th</sup> character as shown:

A v 1 3 G ?

Supipi remembers that the last character is a repeat of one of the other characters and that the security score was 42.

The last character would have been

- (1) v
- (2) G
- (3) either 1 or 3
- (4) either A or G

- o o o -



## SPACE FOR ROUGH WORK

19

A1

1000





## SPACE FOR ROUGH WORK

57. Veera wants to use veera2

What is the security score for this password?

(1) 22

(2) 24

(3) 34

(4) 36

58. A password is made up of 10 sequential uppercase letters.

e.g. ABCDEFGHIJ

What is the highest security rating that this password can have?

(1) weak

(2) moderate

(3) strong

(4) very strong

59. Rohith wants to use a 6-character password made up of identical characters.

Which of the following passwords would give him the highest security score?

(1) 555555

(2) 000000

(3) RRRRRR

(4) 123456

She created a 6-character password made up of letters and numbers only. As yet, she recalls the first 5 characters but has forgotten the 6<sup>th</sup> character as shown.

A v 1 3 G ?

Sopit remembers that the last character is a repeat of one of the other characters and that the security score was 42.

The last character would have been

(1) v

(2) G

(3) either 1 or 3

(4) either A or G

SEAL