

31981

2020  
PAPER-I  
ENGLISH

Time Allowed — 90 min.

Full Marks — 100

*The figures in the margin indicate marks for each question.*

1. Attempt a summary of the following passage: 25

Several times in the history of the world particular countries and cities, or even small groups of people, have attained a high degree of civilization. Yet none of these civilizations, important as they were, have lasted, and one of the reasons why they did not last was that they were confined to a very few people. They were like little oases of civilizations in deserts of barbarism. Now it is no good being civilized if everybody round about you is barbarous, or rather, it is some good, but it is very risky. For the barbarians are always liable to break in on you, and with their greater numbers and rude vigour scatter your civilization to the winds. Over and over again in history comparatively civilized peoples dwelling in cities have been conquered in this way by barbarians coming down the hills and burning and killing and destroying whatever they found in the plains. In the thirteenth century most of Europe was overrun in this way by the Mongols from Central Asia, and such civilization as then existed was nearly destroyed.

None of the noticeable things about modern civilization which is also one of the reasons why it is likely to outlast the others, is, that it is more or less free from this particular danger. And it is free from it because it is far less local and far more widespread than the others; so widespread, indeed, that it already covers a large part of the earth.
  
2. Write a report on how a particular locality in Kolkata voluntarily has taken up good practices of maintaining hygiene and social distancing to bring down active cases of COVID 19 and setting an example for others. 25
  
3. Answer the following according to the instructions given alongside. The full marks for each question are given against it.
  - (a) He died in his native village. 2  
(Change to a Complex sentence)
  - (b) The boy was disobedient, and so the teacher punished him. 2  
(Change into a Simple sentence)
  - (c) If you do not hurry you will miss the train. 2  
(Change into Compound sentence)
  - (d) One should keep one's promises. 2  
(Change into Passive Voice)
  - (e) Our army has been defeated by the enemy. 2  
(Change into Active Voice)

- (f) Hereafter he is disqualified **of/for** holding any government post. 2  
(Choose the correct preposition)
- (g) He is expert **in/on** inventing stories. 2  
(Choose the correct preposition)
- (h) He is intent **upon/on** visiting Norway. 2  
(Choose the correct preposition)
- (i) He said "My master is writing letters." 2  
(Change into Indirect speech)
- (j) He called upon God and said that he was ruined. 2  
(Change into Direct speech of Exclamation)
- (k) Give the antonym of '**ferocious**'. 1
- (l) Give the synonym of '**worthy**'. 1
- (m) He (**talked of/cried out**) against injustice. 1  
(Choose the correct option)
- (n) I was (**let into/put into**) her secret. 1  
(Choose the correct option)
- (o) He (**predicts on/holds out**) no promise for future prospects. 1  
(Choose the correct option)

4. Translate the following passage from Bengali into English. 25

(Who opted Bengali for Paper-II)

গান্ধীজীকে নিয়ে রচিত লুই ফিশার তাঁর প্রবন্ধের শেষের আগের অনুচ্ছেদে তাঁকে পৃথিবীর অন্যান্য নেতাদের সঙ্গে তুলনা করে তাঁর ব্যক্তিত্বের পিছনে রহস্যটি কি তা উদ্ঘাটিত করেছেন। ফিশার বলেছেন যে লয়েড জর্জ, চার্লিস এবং রুজভেল্ট- এর মত পৃথিবীর নেতারা এক বিরাট কর্তৃত্ব প্রয়োগ করতেন এবং এই কর্তৃত্বের উৎস ছিল তাঁদের অধিকৃত উচ্চপদ এবং তার আনুষঙ্গিক আড়ম্বর, যেমন— প্রাসাদ বা ঐতিহাসিক অট্টালিকা, প্রহরী, অপেক্ষা-কক্ষ ইত্যাদি। তাঁদের মহৎ দেখাত এবং তাঁরা তাঁদের ব্যক্তিত্ব ও প্রাধান্য আড়ম্বরের সঙ্গে প্রদর্শন করতেন এবং ফিশারের মতে এগুলি সবই তাঁদের ধার করা পদ থেকে আসত। কিন্তু গান্ধীজী কোন উচ্চপদ অধিকার করেননি আর পৃথিবীর অন্যান্য নেতাদের মত চমকপ্রদ আড়ম্বর তাঁর ছিল না।

Translate the following passage from Hindi into English. 25

(Who opted Hindi in lieu of Bangali for Paper-II)

बेकारी की समस्या नयी नहीं है। परंतु कुछ सामाजिक-आर्थिक परिवर्तनों के कारण इसका रूप और तीव्रता गत वर्षों में अधिक बढ़ गयी है। सबसे पहले एक ओर बढ़ती हुई आबादी के कारण तथा दूसरी ओर हाथ चलित मशीनों के स्थान पर शक्ति चालित मशीनों के आने से हमलों का अर्थ अव्यवस्थित हो गया है। दूसरा, राज्य में मध्यवर्गीय अर्थभूमि का सहारा खो जाने से तथा संयुक्त परिवारों के विभक्त होने से अव्यवस्थित हो गया है। प्रायः प्रत्येक परिवार को एक घर था तथा जमीन से कुछ आमदनी थी। यह और संयुक्त परिवार, बिमारी तथा बेकारी की अवस्था में एक प्रकार की सुरक्षा देते थे।



Time Allowed — 90 min.

Full Marks — 100

If the questions attempted are in excess of the prescribed number, only the questions attempted first up to the prescribed number shall be valued and the remaining ones ignored.

The figures in the margin indicate marks for each question.

- ১। (ক) সন্ধি বিচ্ছেদ করুন : ১×৫=৫  
শিরশ্ছেদ, নীরব, দুলোক, একচ্ছত্র, সর্বৈব।
- (খ) অশুদ্ধি সংশোধন করুন : ১×৫=৫  
অদ্ভুত, অত্যাধিক, দধিচী, সত্বা, পৃথকান্ন।
- (গ) এককথায় প্রকাশ করুন : ১×৫=৫  
জানার ইচ্ছা, ধন্যবাদের যোগ্য যে, গঙ্গার পুত্র, যা ফুরায় না, যে নারী প্রিয় বাক্য বলে।
- (ঘ) সার্থক বাক্যে প্রয়োগ করুন : ১×৫=৫  
গোড়ায় গলদ, পাকা ধানে মই, মাটির মানুষ, আকাশকুসুম, হরিহর আত্মা।
- (ঙ) ব্যাসবাক্যসহ সমাস নির্ণয় করুন : ১×৫=৫  
শ্বেতচন্দন, লাঠালাঠি, দুর্ভিক্ষ, মেঘাচ্ছন্ন, শতাব্দী।

- ২। আবাসনের অধিবাসীবন্দ কর্তৃক ঈশ্বরচন্দ্র বিদ্যাসাগর-এর দ্বিশততম জন্মজয়ন্তী পালন বিষয়ে সংবাদপত্রে প্রকাশ-উপযোগী একটি প্রতিবেদন রচনা করুন। ২৫

- ৩। বঙ্গানুবাদ করুন : ২৫

'I won't take up a lot of your time', said Kantibabu.

'I came across one of your novels recently. So I got in touch with your publisher, took your address and here I am. There is a special reason why I had to see you.'

'Yes? Tell me about it. But before you do, there is so much I want to know. When did you return? Where were you all these years? Where are you now?'

'I returned two years ago. Before that I was in America. Now I live in Barasat.'

'Barasat?'

'I bought a house there.'

'Yes.'

'And a green house?'

'In the house that I had visited before, Kantibabu had a lovely green-house, in which he tended, with great care, several of his rare plants. I had seen such a large number of strange plants there!'

৪। চলিতভাষায় সারাংশ রচনা করুন :

২৫

আমাদের মধ্যে বিলাসিতা বাড়িয়াছে বলিয়া অনেকে কল্পনা করেন যে, ইহা আমাদের ধনবৃদ্ধির লক্ষণ। কিন্তু একথা বিচার করিয়া দেখিতে হইবে যে, পূর্বে যে অর্থ সাধারণের কার্যে ব্যয়িত হইত, এখন তাহা ব্যক্তিগত ভোগে ব্যয়িত হইতেছে। ইহাতে ফল হইতেছে দেশের ভোগবিলাসের স্থানগুলি সমৃদ্ধিশালী হইয়া উঠিতেছে—শহরগুলি ফাঁপিয়া উঠিতেছে—কিন্তু পল্লিগুলিতে দারিদ্র্যের অবধি নাই। সমস্ত বাংলাদেশের পল্লিতে দেবমন্দির ভাঙিয়া পড়িতেছে। পুষ্করিণীর জল স্নানপানের অযোগ্য হইতেছে। গ্রামগুলি জঙ্গলে ভরিয়া উঠিতেছে এবং যে দেশ বারো মাসে তেরো পার্বণে মুখরিত হইয়া থাকিত, সে দেশ নিরানন্দ-নিস্তর হইয়া গিয়াছে। দেশের অধিকাংশ অর্থ শহরে আকৃষ্ট হইয়া কোঠাবাড়ি, গাড়িঘোড়া, সাজসরঞ্জাম, আহারবিহারেই উড়িয়া যাইতেছে। অথচ যাহারা এরূপ ভোগবিলাসে ও আড়ম্বরে আত্মসমর্পণ করিয়াছেন, তাহারা প্রায় কেহই সুখ-স্বাচ্ছন্দ্যে নাই, তাহাদের অনেকেরই টানাটানি, অনেকেরই ঋণ, অনেকেরই পৈতৃক সম্পত্তিকে মহাজনের দায়মুক্ত করিবার জন্য চিরজীবন নষ্ট হইতেছে..... যে ধন সমস্ত দেশের অভাবমোচনের জন্য চারিদিকে ব্যাপ্ত হইত, সেই ধন সংকীর্ণ স্থানে আবদ্ধ হইয়া যে ঐশ্বর্যের সৃজন করিতেছে, তাহা বিশ্বাসযোগ্য নহে। সমস্ত শরীরকে প্রতারণা করিয়া কেবল মুখেই যদি রক্তসঞ্চর হয়, তবে তাহাকে স্বাস্থ্য বলা যায় না।

## HINDI

1. নিম্নলিখিত প্রশ্নों के सटीक उत्तर लिखिए :

(क) निम्नांकित पंक्तियों में विराम-चिह्नों के प्रयोग कीजिए :

5

बचपन में ही प्रेमचंद का नाम सुना था बड़ा होकर उनकी कई कहानियाँ पढ़ी इनमें प्रमुख हैं — मंत्र कफन बड़े घर की बेटी तथा पूस की रात

(ख) अधोलिखित किन्हीं पाँच शब्दों के विशेषण रूप लिखिए :

5

(i) आकाश (ii) नगर (iii) उपज (iv) गुण  
(v) खेल (vi) नाटक (vii) अज्ञान (viii) आप्रय

(ग) नीचे लिखित किन्हीं पाँच शब्दों के शुद्ध रूप लिखिए :

5

(i) प्रमाणिक (ii) अजोध्या (iii) छत्रछाया (iv) पक्षीगण  
(v) विकाश (vi) दूबारा (vii) दुस्कर (viii) महत्व

(घ) नीचे अंकित किन्हीं पाँच शब्दों के विपरीतार्थक शब्द लिखिए :

5

(i) सगुण (ii) गृहस्थ (iii) बंधन (iv) आयात  
(v) जड़ (vi) ज्येष्ठ (vii) उपकार (viii) उपसर्ग

(ङ) निम्नांकित किन्हीं पाँच शब्दों के दो-दो पर्यायवाची शब्द लिखिए :

5

(i) हिमालय (ii) संन्यासी (iii) बिजली (iv) हवा  
(v) मेघ (vi) आकाश (vii) सौंप (viii) तालाव

2. निम्नांकित प्रश्नों के उत्तर अपने शब्दों में दीजिए :

25

'कोरोना' महामारी के प्रकोप से प्रभावित किसी इलाके को आधार बनाकर एक प्रतिवेदन लिखिए।

3. Translate into Hindi :

25

'I won't take up a lot of your time', said Kantibabu.

'I came across one of your novels recently. So I got in touch with your publisher, took your address and here I am. There is a special reason why I had to see you.'

'Yes? Tell me about it. But before you do, there is so much I want to know. When did you return? Where were you all these years? Where are you now?'

'I returned two years ago. Before that I was in America. Now I live in Barasat.'

'Barasat?'

'I bought a house there.'

'Yes.'

'And a green house?'

'In the house that I had visited before, Kantibabu had a lovely green-house, in which he tended, with great care, several of his rare plants. I had seen such a large number of strange plants there!'

4. अधोलिखित अनुच्छेद का सार-संक्षेप प्रस्तुत कीजिए :

25

समाज की सेवा अपनी सेवा है। हम समाज से अलग नहीं हैं। समाज को स्वच्छ रखना हमारा कर्तव्य है। संगत का प्रभाव मनुष्य पर ज्यादा पड़ता है। बुरे आदमियों की संगत में हम अच्छा नहीं कर सकते। जब परिवार के आदमी दुःख से कराहते हों, उस समय हम हँस नहीं सकते। समाज के साथ हमें आजन्म रहना है। यदि हमें अपने आप को सुखी और स्वच्छ रहना है तो अपने परिवार को, अपने पड़ोस को सुखी और स्वच्छ रखना पड़ेगा। परिवार और पड़ोस समाज के ही अंग हैं। कुछ लोगों की यह शिकायत होती है की समय के अभाव के कारण वे समाज की सेवा नहीं कर पाते। यह शिकायत आधार रहित है। अगर आपका पड़ोसी सिरदर्द से छटपटा रहा है और आप टेप-रिकार्डर से गाना सुन रहे हैं — क्या समाज के अंग विशेष के लिए आप गाना सुनना बंद नहीं कर सकते?

## URDU

2×5=10 1.(a) درج ذیل میں ست کسی پانچ کے معنی بتائیے اور انہیں جملوں میں استعمال کیجئے۔

(Give the meaning of any five of the following and use them in your own sentences.)

ہاتھ ملنا - خون کا گھونٹ پینا - طوطا چشم ہونا - پتھر کا کلیجہ ہونا - جان کے لالے پڑنا - عہد توڑنا - غش کھانا  
لیبر کا فقیر ہونا۔

1×5=5 1. (b) کسی پانچ کو جملوں میں اس طرح استعمال کیجئے کہ ان کی جنس واضح ہو جائے۔

(Make any five sentences from the following so that the gender may be clarified.)

مسجد - مندر - تلاوت - تدبیر - تاریکی - ملاقات - عنقا - آنکھ

1×5=5 1.(c) درج ذیل الفاظ میں سے کسی پانچ کی ضد بتائیے۔  
(Write any five opposite from the following words.)

اعلیٰ - آسان - جیت - جنت - چور - انجام - پختہ - نور

5×1=5 1.(d) درج ذیل میں سے کسی ایک کی تعریف کیجئے۔  
(Explain any one from the following.)

(i) اسم صفت کی تعریف کیجئے اور مثالیں دیجئے۔

(ii) ضمیر کی تعریف کیجئے اور مثالیں دیجئے۔

(iii) اسم نکرہ کی تعریف کیجئے اور مثالیں دیجئے۔

25 2. درج ذیل عنوانات میں سے کسی ایک پر رپورٹ تیار کیجئے۔  
(Write a report on any one of the following topics.)

(الف) تعلیم و تربیت

(ب) ملیریا کی روک تھام کے اقدامات

## 3 . Translate into Urdu.

'I won't take up a lot of your time; said Kantibabu.

'I came across one of your novels recently. So I go in touch with your publisher, took your address and here I am. There is a special reason why I had to see you .'

'Yes? Tell me about it. But before you do, there is so much I want to know.

When did you return? Where were you all these years? Where are you now?

'I returned two years ago. Before that I was in America. Now I live in Barasat.'

'Barasat?'

'I bought a house there.'

'Yes.'

'And green house?'

'In the house that I had visited before , Kantibabu had a lovely green house, in which he tended, with great care, several of his rare plants. I had seen such a large number of strange plants there!'

25

درج ذیل اقتباسات میں سے کسی ایک کا خلاصہ لکھیے:

Write a summary of the following passage.

4.

”حامد کے خراٹے کی آواز کمرے کے اندھیرے میں ابھرنے لگی تھی اور مجھ سے نیند کو سوں دور تھی ایسے میں مجھے کیسٹ یاد آیا۔ کیوں نہ ابھی سنا جائے۔ شاید دل کو قرار آ جائے۔ اس احساس کے ساتھ ہی میرا دل بلیوں اچھلنے لگا۔ جانے کیا کچھ اور کس لہجے میں اس نے مجھ سے کہا ہوگا۔ مگر حامد کی نیند توٹ گئی تو۔ اس ڈر سے میں آہستہ آہستہ اپنے پلنگ پر سے اٹھا۔ اندھیرے ہی میں ٹیبل پر سے ٹیپ ریکارڈ اٹھایا اور دروازے سے کیسٹ نکال کر بغل کے کمرے میں چلا آیا۔ درمیان کا دروازہ ہولے ہولے بھڑکایا اور پردے کھینچ دیئے تاکہ روشنی اور آواز سے حامد کی نیند خراب نہ ہو۔ میں نے روشنی کی۔ ریکارڈ میں کیسٹ لگا کر پلیئر ان کر دیا اور دل تھا م کہ ہمہ تن گوش بن گیا۔ کوئی آواز نہیں۔ گھر گھر رشاید شروع کا کیسٹ خالی ہو، اسپڈ نمبر بھاگتے رہے۔ پھر کھٹاک کی آواز کے ساتھ کیسٹ ایک سائینڈ سے ختم ہو گیا۔ میرے دل کی دھڑکن بہت تیز ہو گئی۔ پھر میں نے اپنے حواس کو قابو میں ہی کر لیا۔ سوچا کیسٹ کے دوسرے حصے میں اس نے ٹیپ کیا ہوا شاید۔ سائینڈ بدل کر میں نے پلیئر آن کر دیا۔ پھر گھر گھر کی ایک بھاگتی آواز اور پھر وہی کھٹاک کی آواز کے ساتھ دوسرا سائینڈ بھی ختم۔ مجھے پہلی بار احساس ہوا کہ خلاؤں میں ایک بے وزنی وجود بن کر بے مقصد ڈولنے لگا ہوں۔“



## NEPALI

1. (क) तलका वाक्यांशहरूलाई अर्थ खुल्नेगरि वाक्यमा प्रयोग गर्नुहोस् (कुनै पाँच) (Use any five of the following in your own sentences): 2×5=10  
उडेको चरा समाउनु, कम्मर कस्तु, खुट्टा झिक्नु, जरा गाड्नु, चिसो पस्तु, भीरको चिन्डो हुनु, कन्सिरी ताढ्नु।
- (ख) सन्धि विच्छेद गरेर देखाउनुहोस् (कुनै पाँच) (Disjoin the Sandhis of any five): 2×5=10  
संसार, नमस्कार, प्रत्येक, सज्जन, भाग्योदय, देवर्षि, महेश।
- (ग) विपरीतार्थक शब्द लेख्नुहोस् (कुनै पाँच) (Give the opposite words of any five): 1×5=5  
धर्म, न्याय, जेठो, गुण, नाफा, बन्धन, सचेत।
2. Draft a Report on the following topic (प्रतिवेदन लेख्नुहोस्): 25  
कोभिड-१९ महामारीको समयमा तपाईंले गरेका सकारात्मक (positive) कार्यहरूबारे एउटा प्रतिवेदन लेख्नुहोस्। 25
3. Translate into Nepali :  
'I won't take up a lot of your time', said Kantibabu.  
'I came across one of your novels recently. So I got in touch with your publisher, took your address and here I am. There is a special reason why I had to see you.'  
'Yes? Tell me about it. But before you do, there is so much I want to know. When did you return? Where were you all these years? Where are you now?'  
'I returned two years ago. Before that I was in America. Now I live in Barasat.'  
'Barasat?'  
'I bought a house there.'  
'Yes.'  
'And a green house?'  
'In the house that I had visited before, Kantibabu had a lovely green house, in which he tended, with great care, several of his rare plants. I had seen such a large number of strange plants there!'
4. Write a summary of the following passage (सारांश) : 25  
साहित्यको एउटा विशिष्ट गुण हो चिरस्थायित्व। प्रत्येक जातिका भाषामा हजारौं ग्रन्थहरू प्रकाशन हुन्छन्। भाव र भाषा र शैलीले ती ग्रन्थहरू सुशोभित हुन्छन्। स्थान, काल र पात्रका दृष्टिले अनेकौं ग्रन्थहरू आफ्ना समयमा जनप्रिय हुन्छन् औ अशेष ख्याति लाभ गर्छन्। तर कालान्तरमा ती सबै लुप्त हुन्छन्। जुन ग्रन्थमा सर्वोच्च भाव र भाषा परिपूर्ण हुन्छ, जुन ग्रन्थ पढ्नाले मानिसको कल्पना स्फुटित हुन्छ, जुन ग्रन्थ पढ्नाले निर्दोष र आनन्दप्रद भावना जागृत हुन्छ, त्यही मात्र साहित्य संसारमा अटल र अमर रहन्छ। कवि कालिदासको कृति 'अभिज्ञान शाकुन्तल'-कै उदाहरण लिन सकिन्छ; कति सय वर्ष अघि कविको उर्वर मस्तिष्कबाट पैदा भएको यो मनोहर स्वप्न आज पनि चिरस्थायी छ। कालिदासका समकालीन समाजलाई यसले जस्तो अपार आनन्दको उपलब्धि गराउँथ्यो वर्तमानकालका समाजलाई यसभन्दा कम होइन बेसी नै साहित्य-रस उपभोग गराउँछ। आधुनिक युगका कविसम्राट जर्मन कवि गेट्टेले यसको जस्तो मुग्धकण्ठले औ उच्चसित हृदयले प्रशंसा गरेका छन्। कविगुरु रवीन्द्रनाथले त्यसरी नै 'अभिज्ञान शाकुन्तल'-मा एउटा निबन्ध लेखेर महान् अङ्ग्रेज कवि शेक्सपियरको नाटक 'टेम्पेस्ट'-सित शाकुन्तलको तुलना गरेर शेक्सपियरको दाँजामा तिनले कालिदासको अभिरुचिको श्रेष्ठता देखाएका छन्। कालिदासका ग्रन्थमा यी विशिष्टता भएका हुनाले आज 'शाकुन्तल' भारतीय साहित्यको मात्रै होइन विश्वसाहित्यको एउटा अनमोल रत्न भएको छ।



4. Write a summary on the following passage.

ගමය ගමගමනේදී ඉසව්වයා උනන්දු ඉසව්වයා බවට ඉසව්වයා ප්‍රයෝජන මාරු කිරීමට  
බවට ඉසව්වයා උනන්දු ප්‍රයෝජන මාරු කිරීමට ඉසව්වයා බවට ඉසව්වයා ප්‍රයෝජන මාරු කිරීමට

ඉසව්වයා ප්‍රයෝජන මාරු කිරීමට ඉසව්වයා බවට ඉසව්වයා ප්‍රයෝජන මාරු කිරීමට  
ඉසව්වයා ප්‍රයෝජන මාරු කිරීමට ඉසව්වයා බවට ඉසව්වයා ප්‍රයෝජන මාරු කිරීමට  
ඉසව්වයා ප්‍රයෝජන මාරු කිරීමට ඉසව්වයා බවට ඉසව්වයා ප්‍රයෝජන මාරු කිරීමට

ඉසව්වයා ප්‍රයෝජන මාරු කිරීමට ඉසව්වයා බවට ඉසව්වයා ප්‍රයෝජන මාරු කිරීමට  
ඉසව්වයා ප්‍රයෝජන මාරු කිරීමට ඉසව්වයා බවට ඉසව්වයා ප්‍රයෝජන මාරු කිරීමට  
ඉසව්වයා ප්‍රයෝජන මාරු කිරීමට ඉසව්වයා බවට ඉසව්වයා ප්‍රයෝජන මාරු කිරීමට



2020

PAPER-III

## GENERAL STUDIES AND CURRENT AFFAIRS

Time Allowed — 90 min.

Full Marks — 100

*If the questions attempted are in excess of the prescribed number, only the questions attempted first up to the prescribed number shall be valued and the remaining ones ignored.*

1. Answer *any five* questions: 2×5=10
  - (a) Write the laws of refraction of light.
  - (b) Write with example the difference between mineral and ore.
  - (c) Write two harmful effects of depletion of ozone layer on human health and environment.
  - (d) What is hypermetropia? Which lens is used for its remedy?
  - (e) What is meant by renewable energy source? Give an example.
  - (f) Write down two uses of radioactivity.
  - (g) Which type of electricity is used in electrolysis and why?
  - (h) What are the bacteria called which decompose biomass to methane in biogas plant?
  
2. Answer *any five* questions: 2×5=10
  - (a) Write two differences between hormone and nervous system regarding their mode of functions.
  - (b) "Nitrogen Cycle is getting affected due to human activities".— State two phenomena to justify.
  - (c) Write one cause and one symptom of lung cancer in human being.
  - (d) Write two differences between plant and animal.
  - (e) Write two functions of Mitochondria.
  - (f) Give examples of two ways over population of human affects biodiversity.
  - (g) How does reflex action help in daily life of human being?—Explain with two examples.
  - (h) What is the relation between phenotype and genotype?
  
3. Answer *any ten* questions: 1×10=10
  - (a) What is Metamorphic Rock?
  - (b) What is the name of the steep ridge lying between two corries?
  - (c) What is measured by Beaufort scale?
  - (d) By which unit relative humidity is expressed?
  - (e) Name any two gaseous pollutants.
  - (f) What is the main reason for occurrence of tides?

- (g) Name the highest mountain peak of India.
- (h) Name a cold desert region in India.
- (i) Which state ranks first in per hectare production of rice in India?
- (j) Name the petrochemical centre in West Bengal.
- (k) Which is the longest national highway of India?
- (l) Which is the sparsely populated state of India?
- (m) Which is the most populous city of India?

4. Answer *any fifteen* questions:

2×15=30

- (a) Define the term Nutrition.
- (b) What do you mean by “malnutrition”?
- (c) Define Health.
- (d) What is RDA?
- (e) What is the RDA for energy and protein for a coal mine worker?
- (f) What is “Balanced Diet”?
- (g) Define Energy.
- (h) Write two units of energy.
- (i) Mention two clinical symptoms of Vitamin A deficiency.
- (j) Mention two clinical symptoms of iodine deficiency.
- (k) Why sucrose is a non reducing sugar but maltose is not?
- (l) What are monosaccharides?
- (m) Write the differences between glucose and sucrose with clear structure.
- (n) Define BMR.
- (o) Name one aromatic amino acid and draw the structure.
- (p) Write one important application of Iodine value.
- (q) State any two functional roles of sugar in foods.
- (r) State any two factors affecting protein bioavailability.
- (s) State any two effects of too high intake of Proteins.
5. (a) Indian nationalism grew partly as a result of colonial policies and partly as a reaction to colonial policies. Discuss. 5
- (b) “Though Swadeshi movement failed in achieving its immediate objective, yet it played a significant role in the Indian freedom struggle.” Discuss. 5

6. Answer *all* questions:

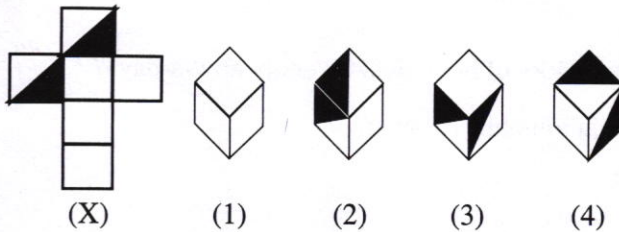
2×5=10

- (a) Select a figure from amongst the Answer Figures which will continue the same series as established by the five Problem Figures.

Problem Figures					Answer Figures				
□	△	?	□	=	?	×	=	△	×
?	=	△	×	□	△	?	□	=	?
×	=	△	×	□	△	?	□	=	?
(A)	(B)	(C)	(D)	(E)	(1)	(2)	(3)	(4)	(5)

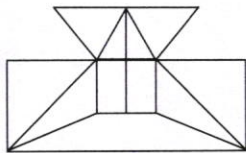
Justify your answer.

- (b) Choose the box that is similar to the box formed from the given sheet of paper (X).



Justify your answer.

- (c) Find the minimum number of straight lines required to make the given figure. Justify your answer.



- (d) Look at this series : 8, 6, 9, 23, 87, ... What number should come next? Give reasons.

- (e) Look at this series : 7, 10, 8, 11, 9, 12, ... What number should come next? Give reasons.

7. Answer *any five* questions:

2×5=10

- During the period of Covid outbreak, which state launched livelihood generation portal for returned migrant workers?
- Which fund is emphasized by National Education Policy 2020 to set up?
- Who was awarded the 2020 Nobel Prize in Physiology or Medicine?
- What is the aim of PURVODAYA mission launched in West Bengal in January 2020?
- State the major research area of Nobel Laureate Dr. Abhijit Vinayak Banerjee in the field of Economics.

- (f) Mention any two objectives of 'Sabooj Sathi' project in West Bengal.
- (g) Mention any two objectives of 'Karma Bhoomi' project in West Bengal.
- (h) In which year Late Former President Pranab Mukherjee was awarded Bharat Ratna Award?

8. Answer *any five* questions:

2×5=10

- (a) What are natural ecosystems?
  - (b) What is food web? Give example.
  - (c) What is meant by conservation of natural resources?
  - (d) What are fossil fuels?
  - (e) What is biodiversity?
  - (f) What are the main causes of the loss of biological diversity now-a-days?
  - (g) What are the air pollutants in automobile exhaust?
  - (h) What is essential in an EIA?
-

31981

2020

PAPER-IV

ARITHMETIC

Time Allowed — 90 min.

Full Marks — 100

*If the questions attempted are in excess of the prescribed number, only the questions attempted first up to the prescribed number shall be valued and the remaining ones ignored.*

*Answer Question number 1 and any sixteen (16) from the rest.*

1. Simplify: 4

$$\frac{4\sqrt{3}}{2-\sqrt{2}} - \frac{30}{4\sqrt{3}-\sqrt{18}} - \frac{\sqrt{18}}{3-2\sqrt{3}}$$

2. If  $x = 1 + \sqrt{2} + \sqrt{3}$  and  $y = 1 + \sqrt{2} - \sqrt{3}$ , then find the value of  $\frac{x^2 + 4xy + y^2}{x + y}$ . 6

3. By selling 12 articles per rupee, there is a loss of 4%. How many articles should be sold per rupee so as to gain 44%? 6

4. The M.P. of a bicycle is ₹ 4000. While selling the bicycle, if three successive discounts of 20%, 10% and 5% are allowed, then what price will the customer pay for it? 6

5. Find the least square number which is exactly divisible by 3, 4, 5, 6, 8. 6

6. Difference of two perfect cubes is 189. If the cube root of the smaller number is 3, then find the cube root of the larger number. 6

7. Three bags contain 64.2 kg of sugar. The second bag contains  $\frac{4}{5}$  of the contents of the first and the third contains  $45\frac{1}{2}\%$  of what there is in the second bag. How much sugar is there in each bag? 6

8. If principal = ₹ 100000, rate of interest = 10% compounded half-yearly, find interest for 6 months and amount after 6 months. 6

9. During school hours, Neha finished 73% of her homework and Minakshi completed  $\frac{5}{8}$  of her homework. Who must finish a greater per cent of homework? 6

10. Madhu's room measures 6m × 3m. Her carpet covers 8m<sup>2</sup>. What per cent of floor is covered by the carpet? 6

11. If  $x$  varies inversely as  $y$  and  $y = 60$  when  $x = 1.5$ , find  $x$  when  $y = 4.5$ . 6

12. If a deposit of ₹ 2000 earns an interest of ₹ 500 in 3 years, how much interest will a deposit of ₹ 36000 earn in 3 years with the same rate of simple interest? 6



13. Shabnam takes 20 minutes to reach her school, if she goes at a speed of 6 km/h. If she wants to reach school in 24 minutes, what should be her speed? 6
14. A boy is cycling such that the wheels of the cycle are making 140 revolutions per hour. If the diameter of the wheel is 60 cm, then calculate the speed (in km/h) with which the boy is cycling. 6
15. Two cubes have volumes in the ratio 1 : 64. Find the ratio of the areas of a face of first cube to that of the other cube. 6
16. On dividing ₹ 200 between A and B, such that twice of A's share is less than 3 times B's share by ₹ 200, what is B's share? 6
17. The population of a town 2 years ago was 62500. Due to migration to cities, it decreases at 4% per annum. Find its present population. 6
18. Divide ₹ 2324 among three children in the ratio  $1\frac{1}{4} : 1\frac{1}{3} : \frac{7}{8}$ . 6
19. A, B and C working separately can do a work in 2, 3 and 4 days respectively. If they all work together and earn ₹ 3900 for the whole work, how should they divide the money? 6
20. Taps A and B can fill a tank in 4 hours and 6 hours respectively and tap C (at the bottom) can empty it in 12 hours. If all the three taps are opened together when the tank is empty, find after how many hours the tank will be full. 6
-