Holiday Homework for Grade 10

ENGLISH

LANGUAGE

Read Passage A to answer Q 1 and Q 2

Question 1

1 **Write the words of the dialogue which takes place between Mother and Son after her arrival.**

For Examiner's Use

In the dialogue you should include:

- Mother's complaints about the journey, and her reasons for not wanting to make it
- Son's dissatisfaction with his life, and his plans for the future
- Mother's response to Son's feelings and intentions.

Base your dialogue on what you have read in Passage A. Address all three bullet points. Be careful to use your own words.

Begin your dialogue:

Mother: 'How I hate travelling…'

Write between 1½ and 2 sides, allowing for the size of your handwriting.

Up to 15 marks are available for the content of your answer, and up to 5 marks for the quality of your writing.

Question 2

Re-read the descriptions of

(a) Mother's apartment in paragraph 2, beginning 'She looked around……';

(b) the view from the plane in paragraph 8, beginning 'At first the surface…'.

Select words and phrases from these descriptions, and explain how the writer has created effects by using this language.

Write between 1½ and 2 sides, allowing for the size of your handwriting.

Up to 10 marks are available for the content of your answer.

Passage A

In this science fiction passage, set in the twenty-second century, a mother reluctantly travels to visit her son.

The Great Benefactor

She was painting an elaborate stylised flower onto her cheek when the holo-phone illuminated. She had silenced the device so as not to be interrupted, but once the flashing light caught her attention she could not ignore it, and in any case her concentration had been broken.

She looked around the small and perfectly square one-roomed apartment, without colour and identical to those of the hundred stacked above hers, as if putting off having to speak to the holo-caller. The walls were of satin steel, with a myriad of tiny halogen lights embedded in the ceiling to create a shimmering effect as they spotlighted the shiny floor composed of grey metal squares.

Apart from the flashing communicator, the apartment was featureless; all the furniture and devices she needed were mentally activated and would materialise soundlessly from the wall and floor as needed. Sighing with annoyance, she put the magenta paint-stick down and looked directly at the holo-phone, bringing it to life with her focused gaze.

'I hope I am not disturbing you, Mother.'
'Actually, Son, I was engaged in a most delicate process.'
'Mother, there is something I want to discuss with you...' His voice tailed off. The hologram of his face seemed to lose clarity.
'Well, what is it?' she asked impatiently.
'Mother, I am not happy.'
There was a shocked silence.
'That is impossible! The Great Benefactor provides for all our needs. You have every amenity that can be imagined. How can you not be happy?'
'Mother, it is too difficult to explain by image transfer. I need you to come to me, so that I can tell you of my yearnings, my need to cross the boundaries.'

She felt numb. To even think this thought was treason. She realised that, distasteful as it was, she needed urgently to visit her son before the Monitors detected him. Touching the channel selector, she ordered a transporter module to her transit platform.

She had not left EurekaBubble for many months. There was no reason to – the surviving population of what had once been called America now all lived in the same bubble. She hated travelling to other bubbles on other continents – where her son had been at the time of the Enclosure – because seeing the ravaged surface of the planet reminded her of the Time of Pain. This was before the Great Benefactor had ended the continuous warfare by unifying the planet under his generous and gracious command, bringing about peaceful and protected life in the bubbles, with no need for work or to ever leave one's apartment. And now here was her own son – her only permitted child – talking in a way which could bring the Monitors to her door to enforce the Rules.

The transporter module whisked her silently to the hoverport. The sleek hoverplane sat on the burnished aluminum launchpad, its door open. It closed as she sat in the single, pearlescent, polyacrylic armchair in the empty cabin. The machine rose vertically, slipped through the brief opening of the dome roof, and she was discharged into the toxic atmosphere beyond.

At first the surface below was featureless and flat, like a monochrome grey carpet, all details erased by the hyper-nuclear weapons which had obliterated civilisation in this area. Once the Wide Water had been crossed, the old continent of Europa appeared: what had once been bustling, magnificent cities now spoke only of desolation and desertion, their tall, broken buildings, with shards of concrete and glass hanging from stark skeletons of steel, like pointing fingers pleading with the indifferent sky. As the plane crossed over a mountain-range that looked like a cake frosted with white icing, she closed the portal blind in disgust. Her meal of lobsterite and chilled mandrake juice slid out of a hatch.

Without warning, the plane descended vertically towards a gigantic, glistening silver dome.

'You are arriving at PhantasmaBubble. Thank you for travelling with HoverAir,' intoned a disembodied voice.

The door slid noiselessly open to reveal her son waiting on the landing platform. It was the first time she had seen him in the flesh for five sun-cycles. She felt an unaccustomed feeling of foreboding. His face looked anxious and flushed, and had it not been impossible for the past three lifetimes, she would have said that he looked unwell.

'Oh, Son, what have you done?' she cried.
'Mother, I must leave the bubble. I must travel the Old World. I must see and feel and breathe the surface of our planet, or I shall die.'

LITERATURE

A.Read the following coursebooks thoroughly

1.Silas Marner

2.Merchant of Venice

3.An Inspector Calls

B Make illustrative presentations of the following poems.It can be through ppt,charts,flashcards etc.To be presented in groups

- Passion
- Stabat Mater
- Tiger in the Menagerie
- Song
- Coming Home

Follow the group numbers discussed in class

Read Passage B to Answer Q 3

Passage B

Common Land

Villagers meet to hear proposals from a large company wishing to develop a piece of common land.

The crowd swarmed into the building, many eager to hear plans that might bring prosperity to their town. Others wore grim expressions, aware of the titanic fight needed to save a precious site. Anuja scanned the people, many roughly dressed and weather-beaten from long hours of working outdoors. None looked well-fed – except the main speaker, the representative of the development company.

'You know why we are here tonight,' a leading member of the community began. 'FoodFreight wants to build a depot on our common land next to the river. Mr Carmichael is here to tell us why we should let them.'

The temperature in the room rose as the meeting wore on. Hands were swept across sweaty brows and some removed outer garments. A short break was announced during which people could look at the glossy plans and maps pinned up around the hall, and enjoy cool drinks and delicious-looking snacks thoughtfully provided by FoodFreight. Fingers traced the lines of new roads on the maps.

A journalist sought out Anuja and her companions. 'The company is just trying to bribe our people,' remarked Anuja. 'Not just with a few drinks but with a promise of a medical centre.'

'Yes,' added a man at her side. 'And I spoke to Dr Misha yesterday when she was here on her weekly visit. She said what we really need is a proper hospital, where operations can take place.'

The meeting resumed. Rufus Carmichael rose to speak. 'As you all know, the area bordering the river is an eyesore. What use is it to anyone? Tall trees cast heavy shade. Noxious weeds choke the ground. Indeed it is an impenetrable thicket, a haven for vermin, a lair for undesirables. And noisy rooks have taken over the canopy, with their raucous, unending cries. We will sweep this away. Your town will be a pleasanter place.' His voice boomed.

Anuja clenched her fist and muttered, 'Those are ancient oaks. The rooks' nests are used by the red-footed falcons, beautiful and rare birds!' She shook her head in disbelief.

Rufus was still talking, '…Warehouses will be built. The new harbour that we will build downstream will create a magnet for your local produce. Your market will overflow with food and will become a symbol of your new-found prosperity.'

Anuja thought of the reliable supply of meat from the deer that fed on the acorns in the woodland, a bonus for local hunters.

'There could be jobs for many of you. And after we have developed the land, we will build a medical centre for you.'

People squirmed in their seats, turning to neighbours to exchange excited comments. Anuja could stand it no longer. 'Sir,' she began, 'and my people: our ancestors began this settlement on that piece of land. They planted those majestic trees hundreds of years ago.' She strode to the front to address the people directly. 'Remember the stories your parents told you. If those trees die, our settlement will fall into decline. Yes, we have neglected it, but with the neglect has come increases in wildlife, even rare species of dragonflies and field mice. We can carefully clear up the mess of weeds so it remains a home to the lovely creatures. We could resurrect the sacred rituals that used to take place here every year.'

As Anuja expanded on the virtues of the site, ragged cheers went up, first from those sitting near her. The sound strengthened as people became again conscious of its many benefits. This was a special place!

Rufus' face tightened into a grimace. His lips had compressed into a thin line of anger. Dots of perspiration sprang out on his forehead. He banged his fist on the table to quieten the crowd. 'Gentlemen – and ladies – just listen to sense,' he began. Jeers and boos broke out. A dark cloud passed across his face, and suddenly he was panting as though he had run a race. His good humour was gone. 'My company is stronger than all of you!' he shouted. 'We will get our way!'

Not long after this, the meeting broke up in some disarray. As Anuja and her friends left, a blue-grey falcon jetted across the skies, the red of its undertail and legs clearly visible. It swooped on a large insect, then veered away before heading for some treetops visible above the houses. Fat drops of rain began to fall, then lightning sizzled across the sky. A portent, perhaps.

Question 3

Imagine you are the journalist from the local newspaper at the meeting.

Write a newspaper report about the meeting.

In your newspaper report you should:

- describe the atmosphere **and** reactions of the crowd at the meeting
- give your impression of the two speakers **and** the arguments that they made
- suggest what you think might happen in the future.

Base your newspaper report on what you have read in Passage A, but be careful to use your own words. Address each of the three bullet points.

Begin your newspaper report: 'Yesterday the local community met together to debate a proposal which has implications for all of us…'.

Write about 250 to 350 words.

Up to 15 marks are available for the content of your answer, and up to 5 marks for the quality of your writing.

Question 4

Attempt one descriptive and one narrative from the topics given below. Word limit for each is 350 -450 words

Descriptive Writing

2 Imagine you have moved house. Describe your new home and your thoughts and feelings as you enter it for the first time.

OR

3 Describe a town or city centre in the early hours of the morning.

OR

Narrative Writing

4 Write a story entitled 'The Lesson'.

OR

5 Write a story which ends with the words, 'I knew things would be different from now on.'

Note

1. Attempt all questions in ruled A4 size preferably white sheets
2. Attach this sheet with the answer sheets
3. Mention the Question number neatly
4. Marks will be awarded for style and presentation of work
5. Do each question on a new sheet
6. Put the sheets neatly in a folder before submission

FRENCH

The holiday homework comprises of all the components

- Listening
- Reading and writing
- Speaking

Mentioned below are some exercises which would help you enhance these skills further.

- Listening exercise

http://www.bbc.co.uk/schools/gcsebitesize/french/listeningf/f05_list_school_rev1.shtml

- Reading and directed writing

http://www.bbc.co.uk/schools/gcsebitesize/french/readingf/atairportrev1.shtml

- Speaking exercise

http://www.bbc.co.uk/schools/gcsebitesize/french/speakingf/f05_interview_leisure_rev1.shtml

- Attempt the 3 exercises in the notebook. You can take the prints and paste them in the notebooks too.
- **Practice all past papers from (2006-2009)**

THE HOLIDAY HOMEWORK CONSTITUTES A PART OF THE INTERNAL ASSESSMENT OF THIS SEMESTER.

GERMAN

The holiday homework comprises of all the components

- Listening
- Reading and writing
- Speaking

Mentioned below are some exercises which would help you enhance these skills further.

- Listening exercise

http://www.bbc.co.uk/bitesize/quiz/q74394370
http://www.bbc.co.uk/bitesize/quiz/q94190791

- Reading and directed writing

http://www.bbc.co.uk/schools/gcsebitesize/german/readingh/pressuresproblemsschool1.shtml

- Speaking exercise

http://www.bbc.co.uk/schools/gcsebitesize/german/speakingh/2worldaroundus_conv_rev2.shtml

- Attempt the 3 exercises in the notebook. You can take the prints and paste them in the notebooks too.
- **Practice all past papers from (2008-2011)**

THE HOLIDAY HOMEWORK CONSTITUTES A PART OF THE INTERNAL ASSESSMENT OF THIS SEMESTER.

PHYSICAL EDUCATION

How muscles and their composition, function and action, affect movement and performance.
The role and function of tendons during movement.

HINDI

Book Name -

PATWAAR

QUESTION – AALEKH (ABHYAS 1-10)

PAGE NO – 219-229

Past question paper of 2012

खंड 1

अभ्यास 1 प्रश्न 1–5.
निम्नलिखित आलेख पढ़िए तथा दिए गए प्रश्नों के उत्तर दीजिए।

'जिस्म तो टूटा, मन नहीं'

राजस्थान के एक दूरस्थ मरुस्थली गांव सुई में एक दुर्घटना के बाद विकलांग बनी ज़िंदगी को ग्रामीण बुजुर्ग शिशुपाल सिंह ने ऐसे बदला जैसे वे स्वयं जीता जागता रेडियो बन गए हों। शिशुपाल पिछले दो दशक से अपने बिस्तर से ही हर रोज़ पूरे गांव को ख़बरें सुनाते हैं। वे ज़रूरी सूचनाएं भी प्रसारित करते हैं। इसके लिए शिशुपाल एक माइक और लाउडस्पीकर का सहारा लेते हैं। उनके प्रसारण में कभी रेडियो की ख़बरें, कभी उपयोगी सूचनाएं और कभी जीवन दर्शन की सूक्तियां शामिल होती है।

दुर्घटना के बाद शिशुपाल की ज़िंदगी एक कमरे में क़ैद होकर रह गई। वह ख़ुद तो दुनिया से कट गए, लेकिन अपने गांव को इस प्रसारण के ज़रिए दुनिया से जोड़े रखा। बीकानेर से कोई 150 किलोमीटर का सफ़र तय कर हम जब सुई गांव पहुंचे तो शिशुपाल अतीत की यादों में खोए मिले। वे कहने लगे – "मैं उस समय दुर्घटना का शिकार हो गया जब सामाजिक कार्य से कहीं जा रहा था। इसमें मेरी रीढ़ की हड्डी टूट गई और फिर मैं कभी उठ न सका।"

शिशुपाल कहते हैं, "मैं हर रोज़ सुबह उठकर लाउडस्पीकर के ज़रिए लोगों का अभिवादन करता हूँ। उन्हें कहता हूँ कि सवेरा हो गया है, नित्य काम में जुट जाएं। इसके बाद मैं कुछ भजन तथा देश-विदेश की ख़बरें भी गांव वालों को सुनाता हूँ। लोगों से आग्रह करता हूँ कि बच्चों को अच्छी शिक्षा दें। लोगों को नशे से दूर रहने को कहता हूँ।"

गांव के हरफूल कहते हैं कि "अगर किसी का मवेशी खो जाए, या राशन का गेहूं बंटने के लिए आया हो, शिशुपाल अपने इस प्रसारण तंत्र के ज़रिए पूरे गांव को ख़बर दे देते हैं। कई बार उनके प्रसारण से खोए हुए मवेशी ग्रामीणों को वापस मिल जाते हैं, यहाँ तक कि गायब हुए आभूषण भी वापस मिले हैं। हमारे लिए शिशुपाल जी बहुत अच्छा काम करते हैं।"

ऐसे समय जब कुछ टीवी चैनल ख़बरों से ज़्यादा विज्ञापन प्रसारित करते हों और सूचनाएं मुनाफे की भेंट चढ़ जाती हों, ये शिशुपाल का उत्साह ही है कि विकलांग ज़िंदगी के बावजूद वे समाज के लिए ख़बरें सुनाते हैं। दुर्घटना ने उनका जिस्म तो तोड़ा लेकिन शिशुपाल ने अपने मन को नहीं टूटने दिया।

1 शिशुपाल को दुर्घटना के बाद रेडियो की संज्ञा क्यों दी गई?

..... [1]

2 शिशुपाल किस माध्यम से सूचनाएं गांव वालों तक पहुंचाते हैं?

..... [1]

3 शिशुपाल किस कार्य के लिए प्रोत्साहित नहीं करते हैं?

..... [1]

4 शिशुपाल के प्रसारण से गांव को क्या मुख्य फायदे हुए हैं? कोई दो उदाहरण दीजिए।

(i) ..... [1]

(ii) ..... [1]

5 क्यों कुछ टी.वी. चैनल उपयोगी जानकारी देने में पीछे रह जाते हैं?

..... [1]

[अंक: 6]

अभ्यास 2 प्रश्न 6

आइए और अपनी रचनात्मक योग्यता का परिचय दीजिए। क्या आप अपनी कला से लोगों को जागरूक ग्राहक बनने का संदेश दे सकते हैं?

'जागो ग्राहक जागो' अभियान
विज्ञान भवन, नई दिल्ली 110001
दूरभाष 2978452390, 2950893451

जागो ग्राहक जागो अभियान पोस्टर प्रतियोगिता आवेदन

जागो ग्राहक जागो अभियान को अखिल भारतीय स्तर पर सफल बनाने के लिए एक पोस्टर प्रतियोगिता आयोजित की जा रही है। इस प्रतियोगिता में 14 से 16 वर्ष की आयु तक के बच्चे भाग ले सकते हैं। प्रतियोगिता में सर्वश्रेष्ठ दस पोस्टरों को सम्मानित किया जाएगा जिसमें विजेताओं को एक वर्ष के लिए छात्रवृत्ति और एक कम्प्यूटर दिया जाएगा।

गीता मारवाह की आयु 16 वर्ष है। वह कक्षा बारहवीं की छात्रा है। गीता मारवाह को चित्रकला में विशेष रूचि है। बचपन से ही रंग बिरंगे चित्र उन्हें आकर्षित करते रहे हैं। विशेषकर बड़े फिल्मी पोस्टरों को वह ज़्यादा पसंद करती है। पोस्टर शैली में विशेष रूचि के कारण ही वे स्कूल के बाद पोस्टर चित्रकला का विशेष प्रशिक्षण ले रही हैं। वे पुणें में अपने परिवार के साथ गणेश अपार्टमेंट के मकान न. 384 में रहती हैं। उसका टेलिफोन न. 25598980l है। उनका ई-मेल पता है gm61@art.ac.in गीता मारवाह की पारंपरिक भिति चित्र शैली में दिलचस्पी है। इसके साथ ही आधुनिक पोस्टर शैली से भी विशेष लगाव है।

गीता मारवाह ने यह विज्ञापन देखा और वह इस प्रतियोगिता के लिए आवेदन करना चाहती हैं।

आप अपने को गीता मारवाह मानकर नीचे दिए गए आवेदन पत्र को भरिए।

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आवेदक का नाम .....गीता मारवाह .....

आयु - .....

ईमेल - .....

स्थायी पता - .....

शहर - .....

दूरभाष - .....

पोस्टर शैली का अनुभव

.....

चित्रकला की दो शैलियों का ब्यौरा दीजिए

.....

.....

.....

[अंक: 7]

अभ्यास 3 प्रश्न 7–9

भूमंडलीकरण के दौर में खेलों के व्यवसायीकरण पर निम्नलिखित लेख पढ़िए।

अगले पृष्ठ पर दिए गए कार्य को निर्देशानुसार पूरा कीजिए।

भूमंडलीकरण के दौर में खेलों का व्यवसायीकरण

व्यवसायीकरण की आंधी से खेलों की दुनिया भी नहीं बची रह सकी। आज खेलों का अपना एक अलग अर्थशास्त्र है। पिछले दिनों भारत में आयोजित इंडियन प्रीमियर लीग यानी आईपीएल ने यह साबित कर दिया कि खेलों का बाजारीकरण किस हद तक किया जा सकता है और यह कितने भारी लाभ का सौदा है। हालांकि, पहले से ही क्रिकेट में पैसों की भरमार रही है लेकिन आईपीएल ने इस खेल की अर्थव्यवस्था को ऐसा विस्तार दिया है कि इसका असर लंबे समय तक बना रहेगा।

एक अनुमान के मुताबिक भारत में खेल उद्योग का आकार दस हजार करोड़ रुपए सालाना तक पहुंच गया है। खेलों ने उत्सव का रूप धारण कर लिया है। यह हमारे दिन-प्रतिदिन के जीवन को प्रभावित करते हैं। बाजार ने खेलों को एक ऐसे उद्योग में तब्दील कर दिया है कि इससे सामान्य जनजीवन पर असर पड़ने लगा है। मैच के हिसाब से लोग अपनी दिनचर्या तय करने लगे हैं। क्रिकेट के अलावा अगर देखें तो भारत में भी अब अन्य खेलों में पैसों का दखल बढ़ा है।

2008 बीजिंग में संपन्न ओलंपिक ने भी यह साबित कर दिया कि खेलों की अपनी एक अलग अर्थव्यवस्था है और भूमंडलीकरण के इस दौर में इसकी उपेक्षा नहीं की जा सकती है। बहरहाल, अब हालत ऐसी हो गई है कि खेल प्रतिस्पर्धाएं कई बहुराष्ट्रीय कंपनियों के बजट पर असर डालने लगी हैं। इस बात में किसी को भी संदेह नहीं होना चाहिए कि खेलों ने एक उद्योग का स्वरूप ले लिया है।

बहरहाल, इस बार के बीजिंग ओलंपिक के बारह मुख्य प्रायोजक थे। इसमें कोडक जैसी कंपनी भी शामिल रही, जिसने आधुनिक खेलों का साथ 1896 से ही दिया है। इसके अलावा ओलंपिक के बड़े प्रायोजकों में कोका कोला भी थी, जो 1928 से ओलंपिक के साथ जुड़ी हुई है। इन बारह मुख्य प्रायोजकों से आयोजकों की संयुक्त आमदनी 866 मिलियन डॉलर तक पहुँच गई है। इसके अलावा कई छोटे प्रायोजक भी ओलंपिक में शामिल थे।

वैसे तो ओलंपिक में पदक जीतने वालों को कोई ईनामी राशि नहीं मिलती है। पर जैसे ही कोई खिलाड़ी पदक जीतता है वैसे ही उस पर धन की बरसात होने लगती है। प्रायोजक ऐसे खिलाड़ियों के जरिए अपने उद्योग को लोकप्रिय बनाने का मौका नहीं गंवाते हैं। इस भारी लाभ का एक अन्य असर है जिसके अंतर्गत कई सुधार कार्यों के लिए यह प्रायोजक कंपनियां आगे आई हैं। कंपनियों द्वारा लाभ का एक अंश उन संस्थाओं को दिया जा रहा है जो स्वास्थ्य, शिशु कल्याण या जलवायु परिवर्तन के क्षेत्र में कार्यरत हैं।

आपके स्कूल में एक निबंध प्रतियोगिता आयोजित की जा रही है। निबंध का विषय है, क्या वास्तव में 'खेलों ने उद्योग का रूप ले लिया है?' भूमंडलीकरण के दौर में खेलों का व्यवसायीकरण नामक लेख में से नीचे दिए गए प्रत्येक शीर्षक के अंतर्गत नोट लिखें जिसपर आपका निबंध आधारित होगा।

7 क्रिकेट का भारतीय अर्थव्यवस्था पर प्रभाव

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8 भारत में रोज़मर्रा के जनजीवन पर खेलों का प्रभाव

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- ..... [1]

9 ओलंपिक खेलों में बड़ी कंपनियों की बढ़ती भूमिका

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- ..... [1]

[अंक: 7]

अभ्यास 4 प्रश्न 10

निम्नलिखित आलेख के आधार पर सारांश लिखिए और बताइए कि किस सीमा तक यह पहल सफल रही है? आलेख की मुख्य बातों को अपने शब्दों में लिखिए।
आपका सारांश 100 शब्दों से अधिक नहीं होना चाहिए।
संगत बिन्दुओं के समावेश के लिए 6 अंक और भाषिक अभिव्यक्ति के लिए 4 अंक निर्धारित हैं। पाठांश से वाक्य उतारना उचित नहीं है।

पर्यावरण संरक्षण की अनूठी पहल

'अर्थपावर' पर्यावरण को बचाने का ऐसा सकारात्मक अभियान है, जिसका इतिहास कुछ साल ही पुराना है। 'वर्ल्डवाइड फंड फ़ॉर नेचर' द्वारा मौसम परिवर्तन के प्रति जागरूकता फैलाने के लिए चलाये गये इस अभियान की शुरुआत 2007 में सिडनी के 22 लाख लोगों ने अपने घर और इंडस्ट्री में एक घंटे ग़ैर ज़रूरी बतियां बंद करके की। इसकी शुरुआत इसलिए भी हुई थी कि गरम हो रही धरती और असंतुलित जलवायु के प्रति कोई भी प्रयास कारगर नहीं हो पा रहा था।

2007 में सिडनी से आरम्भ होने वाले इस अभियान में 2008 तक, यानी एक साल में ही 35 देशों के लगभग पांच करोड़ लोग जुड़े। किसी भी अभियान में एक ही वर्ष में इतनी संख्या में लोगों का शामिल होना इसकी लोकप्रियता दर्शाता है। 2009 में इस अभियान से जुड़ने वाले देशों की संख्या 88 तक पहुंच गयी। 2009 में विश्व के चार हजार शहरों के लगभग आठ करोड़ लोग एक घंटे के लिए अपने घरों व कारखानों में बिजली के उपकरण बंद रख 'अर्थपावर' मुहिम में शामिल हुए।

भारत में 2009 में 50 लाख लोगों ने एक घंटा बतियां बंद रखीं। इस अभियान में 56 शहरों ने भाग लिया। कुतुबमीनार, लाल किला, हुमायूं मकबरा, सिनेमा, माल, सभी एक घंटे तक बंद रहे। इस एक घंटे में 1000 मेगावाट की बिजली बची, 600 मेगावाट केवल दिल्ली शहर में बची। 2009 में मौसम पविर्तन को लेकर किये गये किसी भी प्रयास में यह सबसे बड़ा अभियान था। 'अर्थपावर' की इस एक घंटे में ऊर्जा की बचत ने ग्लोबल वॉर्मिंग से जूझ रही दुनिया को नई राह दिखाई।

प्रति वर्ष मार्च के अंतिम शनिवार को मनाये जाने वाले इस अभियान को इस साल और बल मिला। इस साल भी इस दिन रात्रि साढ़े आठ बजे से साढ़े नौ बजे तक 125 देशों के एक अरब से अधिक लोगों ने धरती के सुरक्षित भविष्य के संकल्प के साथ इसे दोहराया। इस दौरान दुनिया बिजली बचाने के लिए अंधेरे के आगोश में रही। अभियान की सफलता व इसे मिली जन सहभागिता का अंदाजा इसी से लगता है कि पिछले वर्षों की अपेक्षा इस बार आधा घंटा अधिक बतियां बंद रखीं गई। निर्धारित समय में विश्व के आठ सौ से ज़्यादा प्रमुख स्मारकों की बतियां बुझी रहीं। यही नहीं, अनेक नामी गिरामी कंपनियों ने भी अपने कार्यालयों की बतियां बुझा कर इस अभियान को सफल बनाने में पूरा सहयोग दिया।

अर्थपावर की सफलता

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अभ्यास 5 प्रश्न 11–17

निम्नलिखित आलेख को ध्यानपूर्वक पढ़िए और पूछे गए प्रश्नों के उत्तर दीजिए।

'बाबर का स्कूल'

खुले आसमान के नीचे बैठे 20 बच्चे अपनी कक्षा शुरू होने की प्रतीक्षा कर रहे हैं। इन बच्चों में से कुछ अपनी किताबों में आंखें गड़ाए हैं तो कुछ इधर-उधर ताक रहे हैं। इन्हीं बच्चों के बीच में खाकी पैंट पहने खड़े हैं हेडमास्टर साहब जो लगातार जोर-जोर से बच्चों को निर्देश दे रहे हैं। हेडमास्टर की बात सारे बच्चों के मतलब की नहीं है इसलिए कुछ ही दूर टेढ़ी-मेढ़ी लाइनों में बैठे पहली कक्षा के बच्चों को आप हंसी-ठिठोली करते और धूल में खेलते हुए देख सकते हैं।

यह है बाबर अली का स्कूल, आनंद शिक्षा निकेतन। यह स्कूल उन 800 बच्चों की पढ़ने-लिखने में मदद कर रहा है जो औपचारिक शिक्षा तंत्र से छिटक गए हैं। यहां बच्चे कई किलोमीटर दूर से पैदल चलकर आते हैं। बाबर अली का यह आनंद शिक्षा निकेतन स्कूल खेल-खेल में बन गया था। जैसा कि वह बताता है, "हम स्कूल-स्कूल खेला करते थे। क्योंकि मेरे दोस्त कभी स्कूल नहीं गए थे। वे छात्र बनते थे और मैं हेडमास्टर। खेल-खेल में वे अंकगणित सीख गए।" 2002 में बाबर ने इस खेल को कुछ गंभीरता से लिया और स्कूल शुरू कर दिया।

लेकिन बाद में जैसे-जैसे इस नन्हे हेडमास्टर और उसके स्कूल की खबर फैलती गई लोग मदद करने के लिए आगे आते गए। मदद करनेवालों में बाबर के स्कूल शिक्षकों, स्थानीय रामकृष्ण मिशन के संन्यासियों और आईएएस अधिकारियों से लेकर स्थानीय पुलिसकर्मी भी शामिल हो गए। बाबर ने अपने स्कूल में जब मध्याह्न भोजन की शुरुआत की तो पहले चावल उसके पिता के खेत से ही आया लेकिन अब स्थानीय प्रशासन में स्थित दोस्तों की मदद से अनाज सरकारी कोटे से आता है।

इस नन्हे हेडमास्टर का हर दिन सुबह सात बजे अपने स्कूल से शुरू होता है। जहां बाबर बारहवीं कक्षा का छात्र है। दोपहर एक बजे स्कूल खत्म होते ही वह अपनी दूसरी भूमिका के लिए तैयार हो जाता है। दूसरी तरफ सफेद साड़ी पहननेवाली और स्कूल में एक हाथ में छड़ी रखकर घूमनेवाली टुलु रानी हाजरा जो सुबह के समय मछली बेचने का काम करती हैं और दोपहर के वक्त वे इस शिक्षा आंदोलन की सक्रिय सदस्य बन जाती हैं। वे घूम-घूम कर मछली बेचने के दौरान उन लोगों से मिलती हैं, जिन्होंने अपने बच्चों को स्कूल भेजना बंद कर दिया है। अपने स्कूल के लिए नए छात्र जोड़ना भी उनका काम है। अब तक वे ऐसे 80 बच्चों को स्कूल की राह दिखा चुकी हैं।

बाबर की ही तरह दसवीं में पढ़नेवाले इम्तियाज शेख कहते हैं, "शिक्षा अंधियारा दूर करता है। यहां जिंदगी बेहतर बनाने का यही रास्ता है। इसीलिए मैं आनंद शिक्षा निकेतन में पढ़ाता हूं।" लेकिन क्या इन शिक्षकों की कम उम्र छात्रों को संभालने में आड़े नहीं आती? इस पर बाबर कहते हैं, "हमारे बीच उम्र का कम फासला इस हिसाब से फायदेमंद है कि हम छात्रों के साथ दोस्तों की तरह रह सकते हैं। मेरे स्कूल में छड़ी कोने में पड़ी रहती है।" सपने देखनेवाले और उन्हें जमीन पर उतारनेवाले इस नन्हे हेडमास्टर का अगला सपना है- अपने स्कूल के लिए एक पक्की इमारत। वे चाहते हैं कि एक प्रयोगशाला, खेल का मैदान और ऑडिटोरियम भी बन सके। लेकिन ये फिलहाल बाद की बातें हैं।

निम्नलिखित प्रश्नों के उत्तर सही और ग़लत का निशान लगाकर दीजिए। यदि वाक्य ग़लत है तो पाठांश के आधार पर वह वाक्य भी लिखिए जिससे वाक्य सही साबित होता है।

	सही	ग़लत
उदाहरण – बच्चे कक्षा के अंदर बैठे हैं।	☐	☑
औचित्य – बच्चे खुले आसमान के नीचे बैठे हैं।		

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11 हेड मास्टर की बात सारे बच्चे ध्यान से सुन रहे हैं। ☐ ☐

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12 स्कूल में बच्चे साइकिलों पर आते हैं। ☐ ☐

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13 बाबर अली और उनके दोस्तों ने खेल खेल में ही अंकगणित सीखा। ☐ ☐

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14 मध्याह्न भोजन के लिए चावल अभी भी बाबर के पिता के खेत से आता है। ☐ ☐

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15 प्रत्येक दिन बाबर अली की पहली भूमिका क्या है?

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16 टुलु रानी हाजरा स्कूल के लिए क्या काम करती हैं?

..... [1]

17 क्यों स्कूल में छड़ी कोने में पड़ी रहती है?

..... [1]

[अंक: 10]

अभ्यास 6 प्रश्न 18

क्या सचमुच वीडियो खेलों और टेलिविज़न ने पढ़ने की संस्कृति को प्रभावित किया है?

ऊपर लिखे शीर्षक पर आपके स्कूल में एक भाषण प्रतियोगिता आयोजित की जा रही है। आप इस प्रतियोगिता में हिस्सा लेना चाहते हैं। अपने विचारों को प्रस्तुत करने के उद्देश्य से अपना भाषण नीचे दिए स्थान पर लिखिए।

आपका भाषण 150 से 200 शब्दों से अधिक नहीं होना चाहिए।
लिखित भाषण पर अंक विषय संबंधी अंर्तवस्तु, शैली और सही भाषा लिखने पर दिए जाएंगे।

[अंक: 20]

MATHEMATICS

1.

(a) (i) Factorise completely the expression $4x^2 - 18x - 10$.

Answer(a)(i) ..... [3]

(ii) Solve $4x^2 - 18x - 10 = 0$.

Answer(a)(ii) $x =$ ..... or $x =$ ..... [1]

(b) Solve the equation $2x^2 - 7x - 10 = 0$.

Show all your working and give your answers correct to two decimal places.

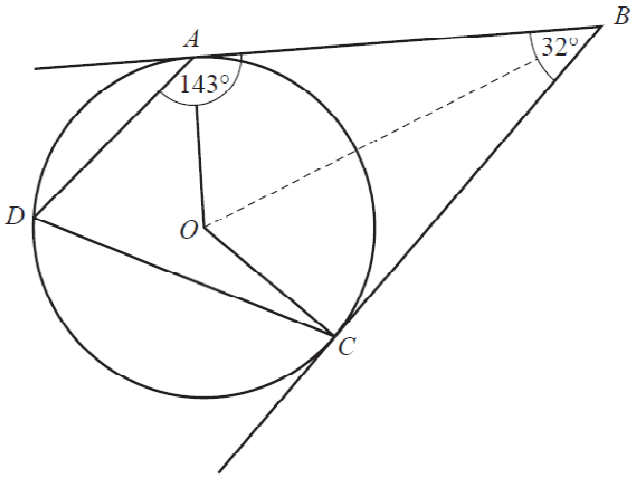
Answer(b) $x =$ ..... or $x =$ ..... [4]

(c) Write $\frac{6}{3x-1} - \frac{2}{x-2}$ as a single fraction in its simplest form.

Answer(c) ..... [3]

2.

(a)



NOT TO SCALE

Points *A*, *C* and *D* lie on a circle centre *O*.
BA and *BC* are tangents to the circle.
Angle *ABC* = 32° and angle *DAB* = 143°.

(i) Calculate angle *AOC* in quadrilateral *AOCB*.

Answer(a)(i) Angle *AOC* = ... [2]

(ii) Calculate angle *ADC*.

Answer(a)(ii) Angle *ADC* = ... [1]

(iii) Calculate angle OCD.

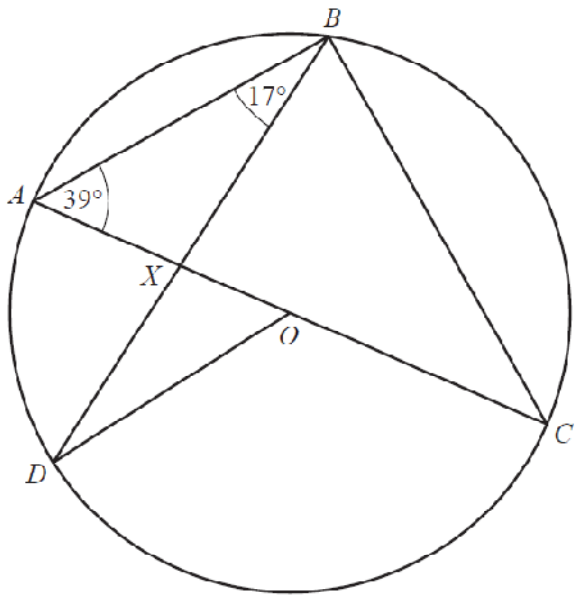
Answer(a)(iii) Angle OCD = ... [2]

(iv) $OA = 6$ cm.

Calculate the length of AB.

Answer(a)(iv) AB = ... cm [3]

(b)



NOT TO SCALE

A, B, C and D are on the circumference of the circle centre O.
AC is a diameter.
Angle $CAB = 39°$ and angle $ABD = 17°$.

(i) Calculate angle *ACB*.

Answer(b)(i) Angle *ACB* = ... [2]

(ii) Calculate angle *BXC*.

Answer(b)(ii) Angle *BXC* = ... [2]

(iii) Give the reason why angle *DOA* is 34°.

Answer(b)(iii) ..... [1]

(iv) Calculate angle *BDO*.

Answer(b)(iv) Angle *BDO* = ... [1]

(v) The radius of the circle is 12 cm. Calculate the length of major arc *ABCD*.

Answer(b)(v) Arc *ABCD* = ... cm [3]

3.

(a) $\mathscr{E}$ = {25 students in a class}

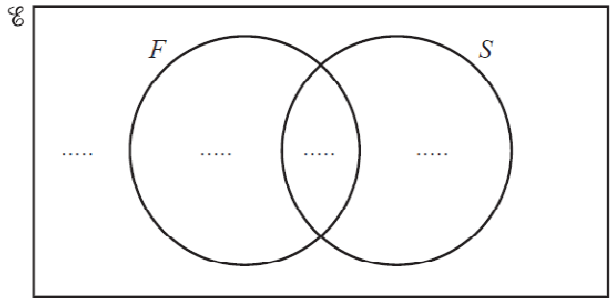
F = {students who study French}

S = {students who study Spanish}

16 students study French and 18 students study Spanish.

2 students study neither of these.

(i) Complete the Venn diagram to show this information.



[2]

(ii) Find n(F').

Answer(a)(ii) ..... [1]

(iii) Find n($F \cap S$)′.

Answer(a)(iii) ..... [1]

(iv) One student is chosen at random.

Find the probability that this student studies both French and Spanish.

Answer(a)(iv) ..... [1]

(v) Two students are chosen at random without replacement.

Find the probability that they both study only Spanish.

Answer(a)(v) ..... [2]

(b) In another class the students all study at least one language from French, German and Spanish.

No student studies all three languages.

The set of students who study German is a proper subset of the set of students who study French.

4 students study both French and German.

12 students study Spanish but not French.

9 students study French but not Spanish.

A total of 16 students study French.

(i) Draw a Venn diagram to represent this information.

[4]

(ii) Find the total number of students in this class.

Answer(b)(ii) ..... [1]

4.

(a) The table shows how many books were borrowed by the 126 members of a library group in a month.

Number of books	11	12	13	14	15	16
Number of members (frequency)	35	28	22	18	14	9

Find the mode, the median and the mean for the number of books borrowed.

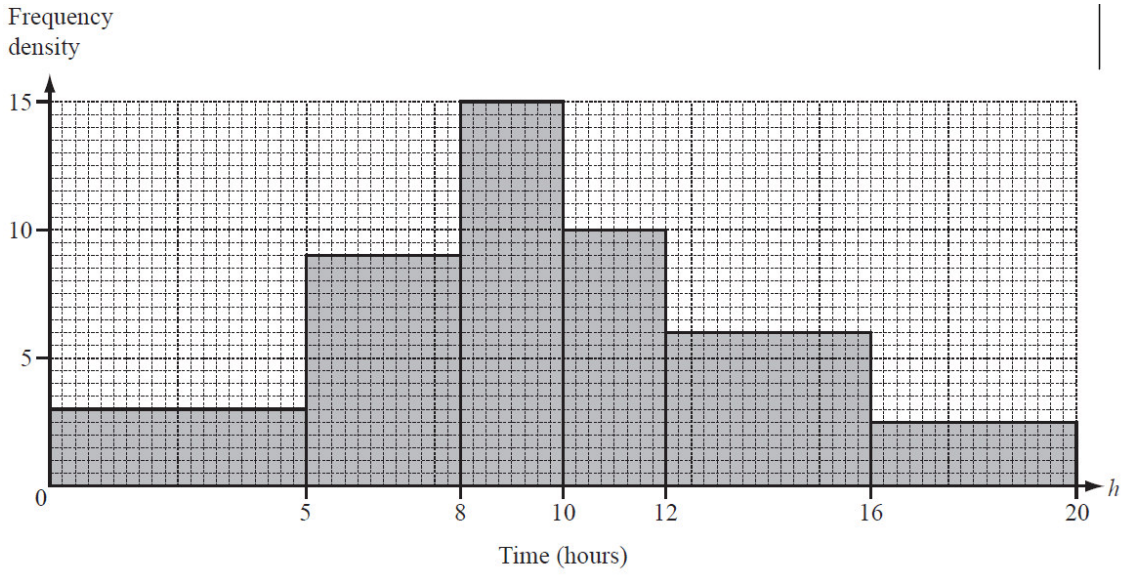
Answer(a) mode = ...

median = ...

mean = ... [6]

(b) The 126 members record the number of hours they read in one week.

The histogram shows the results.



(i) Use the information from the histogram to complete the frequency table.

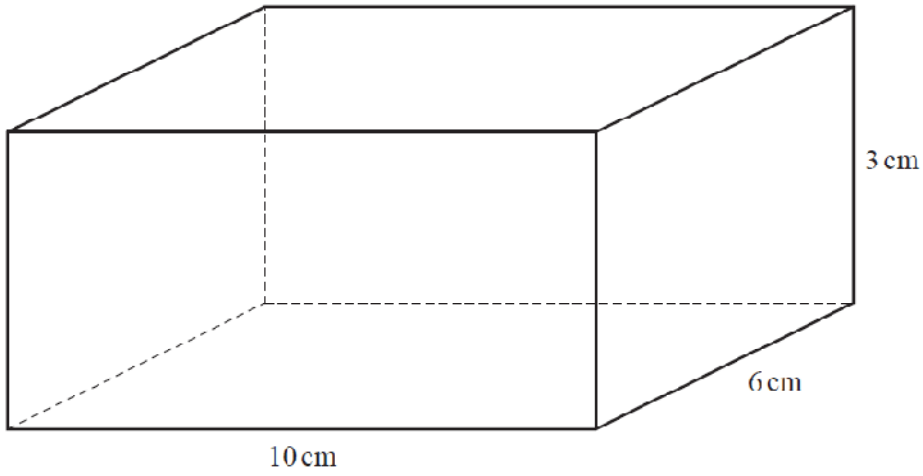
Number of hours (h)	$0 < h \leqslant 5$	$5 < h \leqslant 8$	$8 < h \leqslant 10$	$10 < h \leqslant 12$	$12 < h \leqslant 16$	$16 < h \leqslant 20$
Frequency				20	24	10

[3]

(ii) Use the information in this table to calculate an estimate of the mean number of hours. Show your working.

Answer(b)(ii) ..... hours [4]

5.



A solid metal cuboid measures 10 cm by 6 cm by 3 cm.

(a) Show that 16 of these solid metal cuboids will fit exactly into a box which has internal measurements 40 cm by 12 cm by 6 cm.

Answer(a)

[2]

(b) Calculate the volume of **one** metal cuboid.

Answer(b) ..... cm^3 [1]

(c) One cubic centimetre of the metal has a mass of 8 grams.
The box has a mass of 600 grams.

Calculate the **total** mass of the 16 cuboids **and** the box **in**

(i) grams,

Answer(c)(i) ..... g [2]

(ii) kilograms.

Answer(c)(ii) ..... kg [1]

(d) (i) Calculate the surface area of **one** of the solid metal cuboids.

Answer(d)(i) ..... cm^2 [2]

(ii) The surface of each cuboid is painted. The cost of the paint is $25 per **square metre**.

Calculate the cost of painting all **16** cuboids.

Answer(d)(ii) $ ..... [3]

(e) **One** of the solid metal cuboids is melted down.
Some of the metal is used to make 200 identical solid spheres of radius 0.5 cm.

Calculate the volume of metal from this cuboid which is **not** used.

[The volume, V, of a sphere of radius r is $V = \frac{4}{3}\pi r^3$.]

Answer(e) ..... cm^3 [3]

(f) 50 cm^3 of metal is used to make 20 identical solid spheres of radius r.

Calculate the radius r.

Answer(f) $r =$ ..... cm [3]

6.

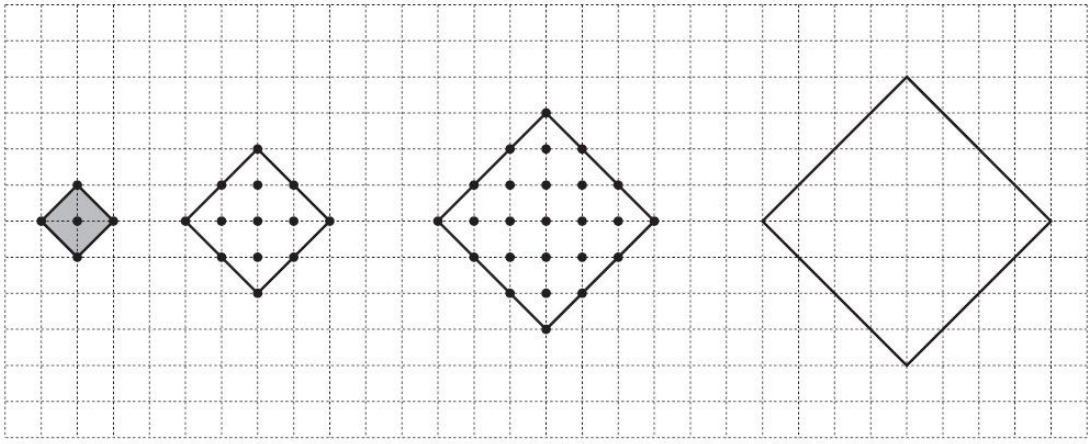


Diagram 1 Diagram 2 Diagram 3 Diagram 4

The diagrams show squares and dots on a grid.

Some dots are on the sides of each square and other dots are inside each square.

The area of the square (shaded) in Diagram 1 is 1 unit^2.

(a) Complete Diagram 4 by marking all the dots. [1]

(b) Complete the columns in the table below for Diagrams 4, 5 and n.

Diagram	1	2	3	4	5	-------	n
Number of units of area	1	4	9			-------	
Number of dots inside the square	1	5	13			-------	$(n-1)^2 + n^2$
Number of dots on the sides of the square	4	8	12			-------	
Total number of dots	5	13	25			-------	

[7]

(c) For Diagram 200, find the number of dots

(i) inside the square,

Answer(c)(i) ..... [1]

(ii) on the sides of the square.

Answer(c)(ii) ..... [1]

(d) Which diagram has 265 dots inside the square?

Answer(d) ..... [1]

7.

Alberto and Maria share \$240 in the ratio 3 : 5.

(a) Show that Alberto receives \$90 and Maria receives \$150.

Answer(a)

[1]

(b) **(i)** Alberto invests his \$90 for 2 years at r % per year **simple** interest.
At the end of 2 years the amount of money he has is \$99.
Calculate the value of r.

Answer(b)(i) r = ... [2]

(ii) The \$99 is 60% of the cost of a holiday.
Calculate the cost of the holiday.

Answer(b)(ii) \$ ..... [2]

(c) Maria invests her \$150 for 2 years at 4% per year **compound** interest.
Calculate the exact amount Maria has at the end of 2 years.

Answer(c) \$ ..... [2]

(d) Maria continues to invest her money at 4% per year **compound** interest.
After 20 years she has $328.67.

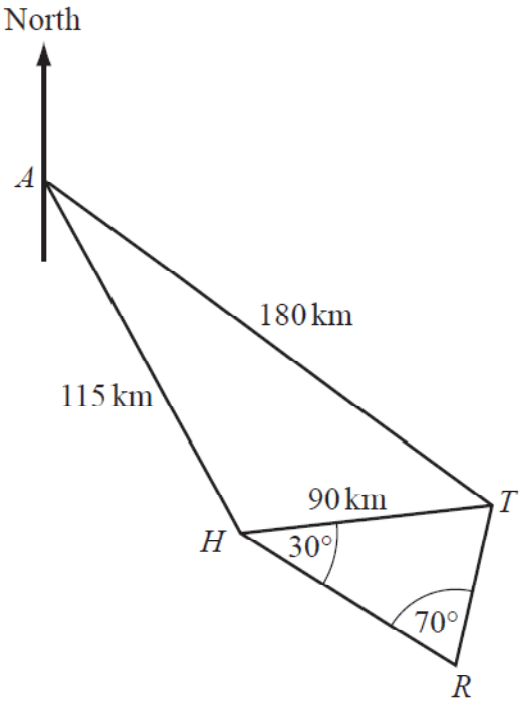
(i) Calculate exactly how much more this is than $150 invested for 20 years at 4% per year **simple** interest.

Answer(d)(i) $ ..... [3]

(ii) Calculate $328.67 as a percentage of $150.

Answer(d)(ii) ..... % [2]

8.



The diagram shows some straight line distances between Auckland (A), Hamilton (H), Tauranga (T) and Rotorua (R).
AT = 180 km, AH = 115 km and HT = 90 km.

(a) Calculate angle *HAT*.
Show that this rounds to 25.0°, correct to 3 significant figures.

Answer(a)

[4]

(b) The bearing of *H* from *A* is 150°.

Find the bearing of

(i) *T* from *A*,

Answer(b)(i) ..... [1]

(ii) *A* from *T*.

Answer(b)(ii) ..... [1]

(c) Calculate how far *T* is east of *A*.

Answer(c) ..... km [3]

(d) Angle $THR = 30°$ and angle $HRT = 70°$.

Calculate the distance TR.

Answer(d) ..... km [3]

(e) On a map the distance representing HT is 4.5cm.

The scale of the map is $1 : n$.

Calculate the value of n.

Answer(e) $n =$ ..... [2]

9.

Rearrange the formula $y = \frac{x+2}{x-4}$ to make x the subject.

Answer $x =$ ..... [4]

10.

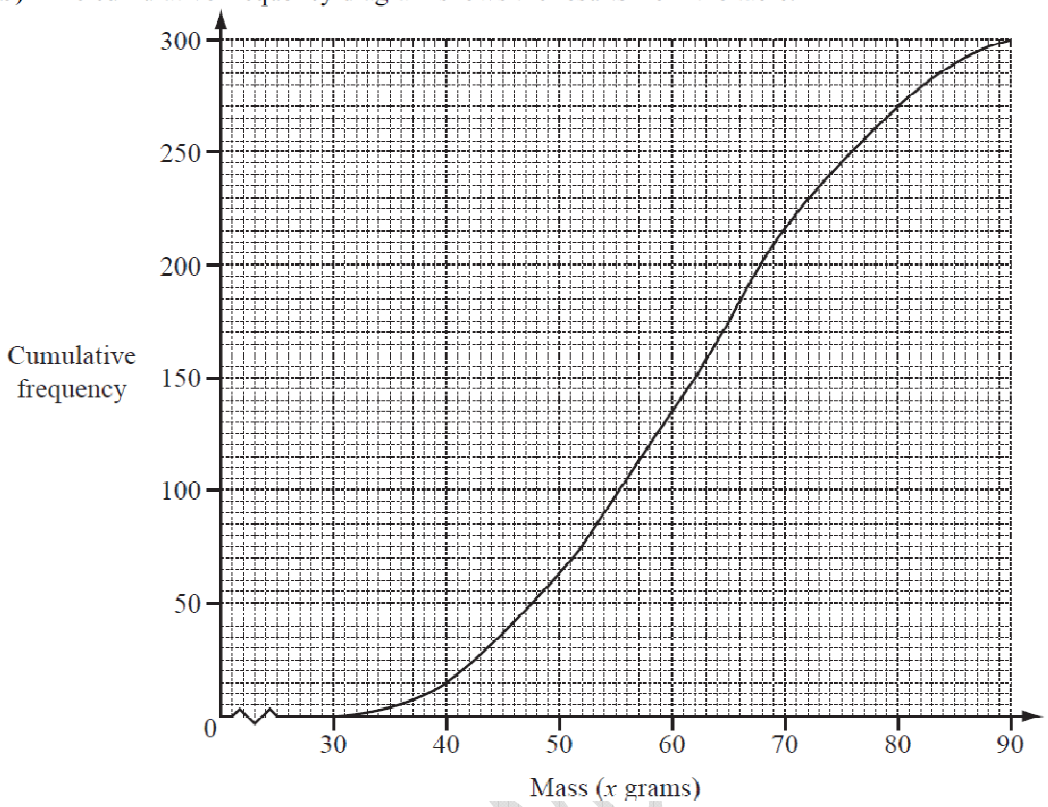
Lauris records the mass and grade of 300 eggs. The table shows the results.

Mass (x grams)	$30 < x \leqslant 40$	$40 < x \leqslant 50$	$50 < x \leqslant 60$	$60 < x \leqslant 70$	$70 < x \leqslant 80$	$80 < x \leqslant 90$
Frequency	15	48	72	81	54	30
Grade	small		medium	large	very large	

(a) Find the probability that an egg chosen at random is graded very large.

Answer(a) ..... [1]

(b) The cumulative frequency diagram shows the results from the table.



Use the cumulative frequency diagram to find

(i) the median,

Answer(b)(i) ..... g [1]

(ii) the lower quartile,

Answer(b)(ii) ..... g [1]

(iii) the inter-quartile range,

Answer(b)(iii) ..... g [1]

(iv) the number of eggs with a mass greater than 65 grams.

Answer(b)(iv) ..... [2]

INFORMATION AND COMMUNICATION TECHNOLOGY

Design a FrontPage webpage that displays a table containing the details of different books in the school library. You can take following structure of table:-

S.no	Subject	Book Name	Author

Input details for at least 4 books. Each book is hyperlinked to another page that displays the content of that book. The content of the book contains over view of book. Whenever a book name is clicked, it opens up a new browser window showing the contents of that book**.**

ECONOMICS

- It is compulsory to attempt both sections.
- You may submit your work in a neat project file with your name written on it.
- Make an attractive cover with colourful and informative articles read during the summer break and relating to the IGCSE Economics curriculum.

Section A

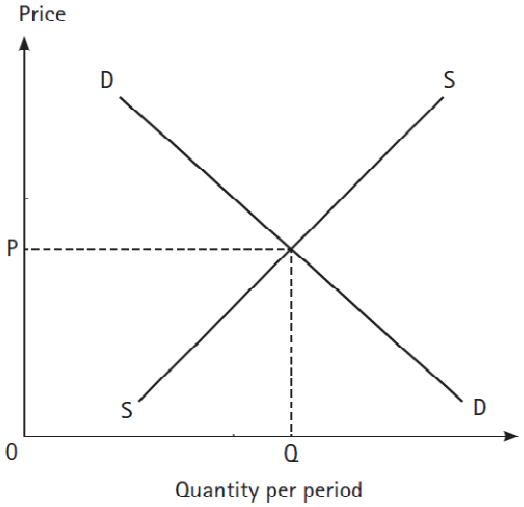
1. Use the definitions at the bottom of the page to find the economic terms and concepts they describe in the word jumble below.

M	O	K	P	C	O	N	T	E	S	T	A	B	L	E	Y	V
O	L	F	I	K	W	S	G	T	O	D	E	T	O	C	M	B
J	M	O	N	O	P	O	L	Y	F	I	N	D	M	O	X	A
L	A	S	E	T	R	G	O	A	C	A	R	T	E	L	D	R
Q	R	D	E	S	T	R	U	C	T	I	O	N	F	L	T	R
X	K	C	U	F	D	S	I	N	E	P	A	X	I	U	Z	I
I	E	E	X	P	A	N	S	I	O	N	B	G	B	S	C	E
N	T	S	E	X	T	U	P	L	E	T	N	R	A	I	U	R
E	S	I	D	U	O	P	O	L	Y	X	O	U	C	O	T	S
F	H	T	P	Q	R	Z	S	I	B	C	R	N	D	N	U	T
F	A	O	U	L	Y	I	J	N	C	S	M	T	Y	U	P	O
I	R	P	R	I	C	E	W	A	R	W	A	W	O	T	F	E
C	E	M	E	C	D	E	S	T	R	A	L	O	R	J	O	N
I	K	Y	G	K	N	O	N	P	Y	M	P	A	T	E	N	T
E	C	F	U	U	L	E	G	A	L	W	R	T	O	T	D	R
N	I	A	V	P	O	L	I	G	O	P	O	L	Y	F	U	Y
C	L	C	K	N	J	T	O	R	T	U	F	K	O	U	E	M
Y	F	E	E	O	T	F	Y	P	O	L	I	L	U	J	S	U
M	A	R	K	E	T	S	T	R	U	C	T	U	R	E	T	P

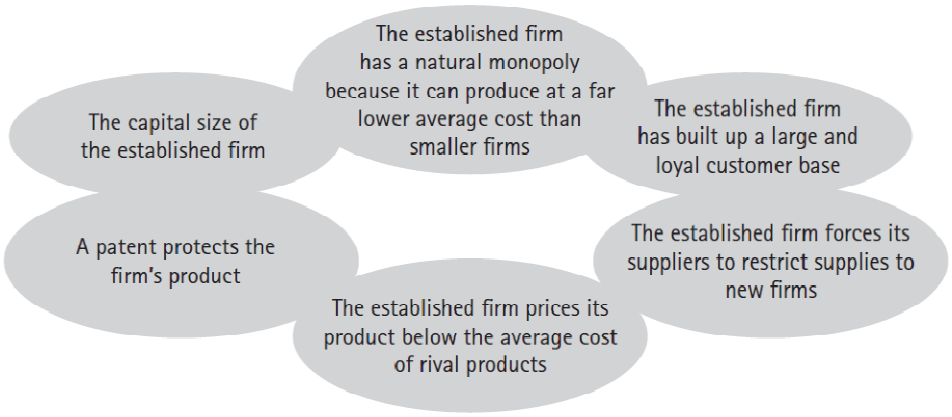
- A firm or group of firms acting together to control the market supply of a good or service
- The degree of competition there is between firms to supply a market
- The proportion of total sales revenue or volume sold in a particular market by an individual firm
- A formal agreement between firms to control market supply and set the market price
- When firms act together to fix the market price of a product
- A type of monopoly in which two firms control the entire market supply of a product
- A type of monopoly when only one firm controls the entire market supply of a product
- A firm may be granted one of these from a government to protect its new product or innovation from being copied, thereby providing it with a legal monopoly
- A type of market in which the market supply is dominated by a handful of firms
- An excess of profit earned by a monopoly over and above what it would otherwise have earned had there been competition in its market
- A highly destructive pricing strategy fought between a handful of competing firms each trying to undercut their rivals to force them out of the market
- A pricing strategy used by a monopoly to deter new competition by setting product price below the average cost per unit of the new firm

- A pricing strategy often used by new firms, or firms introducing new products to a market, that aims to quickly grow consumer demand and expand market share
- Obstacles, either occurring naturally or created artificially by a dominant firm or group of firms acting together, to restrict competition and stop new firms from entering their market
- A term used to describe organizational slack and poor cost control in a monopoly firm because it lacks a competitive threat to its market position and profits
- A term used to describe a market to which there are few entry barriers and it is easy for new firms to enter to compete with established firms for their market share and profits

2. Competition in the following market between a small number of large dominant firms is fierce. Imagine now they agree to collude to raise the market price. Show how they would do this and the impact it would have in the market diagram.



3. A monopoly can restrict competition from new firms in a number of ways. Which of the following describe natural barriers to entry and which are artificial barriers to entry?



4. What do the following statements describe?

Rivalry between producers which involves each one trying to distinguish or differentiate its product from competing products on attributes such as product design and features, packaging and customer service. It typically involves promotional activities and new product development. Firms often engage in this form of rivalry to avoid costly price wars.

.....

A market structure in which there are a large number of firms with the same costs competing to supply an identical product and an equally large number of consumers wishing to buy it. No one firm or consumer therefore has any influence over the market price.

.....

Promotional communications designed to create or boost consumer wants for a product, often by creating strong brand images to encourage customer loyalty.

.....

Section B

Do a comparative analysis of any two economies of the world on the basis of certain parameters such as GDP estimates, economic growth rate, population size, share of public versus private sector in GDP, exports and imports, size and structure of population and population growth rates, education, economic system, GDP per head, value of HDI, Employment in the different sectors of production, level of poverty and life expectancy

- You may represent data graphically to make your analysis look attractive and interesting, attach pictures, charts etc.
- Based on your analysis you may draw certain conclusions about developed and less developed economies.

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GEOGRAPHY

Topic : Case studies

1. Describe the problems which occur in the CBD of an urban area you have studied. Explain why these problems occur. (7)

2. For a named country you have studied, describe how the government has attempted to influence population growth. (7)

3. Name an area where either manufacturing or processing industry is important and give an example of a type of industry (or factory) which you have studied in that area. Explain the reasons for its growth at that location. (7)

4. Name a city and describe what has been done to improve living conditions in the slums found there. (7)

5. Name an area which you have studied where there has been an earthquake/volcanic eruption. Describe the effects of this disaster. (7)

COMPUTER SCIENCE

Design a game or story using Scratch software. Your Project should use various controls and blocks define in scratch software. Add animations to make your project more attractive.

BUSINESS STUDIES

Instructions: The homework is split into section A and Section B. Choose any one question from Section A and attempt all the questions from Section B.

Section A

1. Select a Public Limited Company of your choice and collect the following information regarding that company :

a) Brief history
b) Mission statement
c) Names of its top level officials.
d) Details of the products manufactured and marketed
e) Brand name of the company.
f) Market standing
g) Types of sales promotional techniques used. (paste the advertisements given in the newspapers/ magazines)
h) Labeling of its products. (paste the labels of its various products)
i) Innovations made by the company and future plans
j) Kinds of risks faced by the company
k) Comment on the social responsibility pursued by that company.
l) List of subsidiary companies
m) Capital structure / Balance Sheet
n) Amount of dividend declared by the company during the last two years.
o) Type of organizational structure followed
p) Public issue details along with prospectus
q) Changes in the market value of its shares during the last three months. (draw a suitable diagram to represent such changes)
r) Customer support services provided by the company.

For reference :
(1) "Social responsibility of a business refers to its obligation to take those decisions and perform those actions which are desirable in terms of the objectives and values of the society."
(2) "Capital structure refers to the mix between owners and borrowed funds."
(3) "Dividend is that portion of profit which is distributed to the shareholders."

2. Visit any two of the following outlets and find out how the goods reach them, starting from their dispatch from the producers. Prepare a chart showing the channel of distribution being followed for each case.
   (i) A grocery shop
   (ii) A home appliances shop
   (iii) A readymade garment shop
   (iv) A franchise shop in any chain

Section B

1. Answer the following questions in your notebook based on the case study.

The Marketing Department of DD Fruits PLC needs to decide on the product and packaging details of the new fruit drink. Many drinks are alike and it is through marketing that one sets its own product apart from the competition.

a. Do you think that the company should give the new fruit drink a brand name?
b. Marketing is about perception. How do you think that DD Fruits PLC is going to create an impression that their fruit drink is superior to others and hence can command a higher price?
c. Do you think packaging plays a role other than that of protection of the goods inside it?
d. Explain some of the extension strategies that maybe used by DD fruits PLC at the decline stage of its product.The prices charged by DD Fruits PLC are very important for the success of the drink.

a. How do the pricing strategies change at different stages of the PLC?
b. D and V limited are manufacturers of packaging of drink. They charge different prices to large factories of fruit drinks in comparison to smaller factories. Why do you think they do this?

DD Fruits PLC now has to promote its new drink.

a. Identify atleast five advertising media where the new fruit drink may be advertised.
b. For each of the above mentioned advertising media, find out the finance implications for DD Fruits PLC.
c. What benefits does the Co. stand to gain from advertising on social media?
d. When do businesses use promotional activities and why?

DD Fruits PLC now has to get the drink to the customer. The drink has to be available where the customer wants to buy it.

a. Identify four channels of distribution that the Co. may use.
b. DD Fruits PLC in uncertain of the type of outlet it wants to sell in. How does the inventory ordering of large retail outlet chain differ from those of the small shop?
c. What are the benefits of selling through a wholesaler?
d. Is selling on the internet suitable for DD Fruits PLC?

BIOLOGY

Q.1 Do questions on pages 94, 95, 118,119,133-Q.3, 134-Q.4, 6 of your Biology textbook-(Complete Biology for Cambridge IGCSE-Third Edition) in a separate notebook.

Q.2 Read the Newspapers and collect pictures and information regarding recent developments in the field of Biology (Any 5). Make a portfolio for it.

Q.3 Make a powerpoint presentation on any one of the topics mentioned below; keeping the following points in mind:

i) Should be of 12-15 slides

ii) Should be informative and innovative

iii) Should have pictures

iv) Two slides should be related to interesting facts on the respective topic.

v) Two slides on the use of the specific topics in daily life or in the field of medicine.

Topics are:

a. Different types of blood cells and their adaptation with respect to their functions.

b. Role of different types of blood cells in providing immunity to the body.

c. Smoking and its harmful effects on human health.

d. Role of kidneys (nephron) in filtering blood to remove toxic waste.

e. Structure and working of Human Heart and coronary heart disease(CHD).

f. Dialysis and kidney transplant- What is it, its need and their pros and cons.

g. Diabetes-types; its causes and effects on Human health.

Submit it in the pen-drive marked with your name on it.

CHEMISTRY

Q.1 Do questions on pages 40,41, 60,61,70,71, 96 & 97 of your chemistry textbook- (Complete Chemistry for Cambridge IGCSE-Third Edition) in a separate notebook.

Q.2 Make a powerpoint presentation on any one of the topics mentioned below; keeping the following points in mind:

i) Should be of 12-15 slides

ii) Should be informative and innovative

iii) Should have pictures

iv) Two slides should be related to interesting facts on the respective topic.

v) Two slides on the use of the specific topics in daily life or chemical industry.

Topics are:

a. Mole concept

b. Organic compounds and their uses

c. Polymers and their uses

d. Covalent and ionic bonds and compounds

e. The Periodic table- A necessity for chemists

f. Different types of Metals and their uses

Submit it in the pen-drive marked with your name on it.

PHYSICS

1 A comet, travelling in space, enters the atmosphere of a planet.
Fig. 1.1 is the speed-time graph for the comet from time $t = 0$ s.

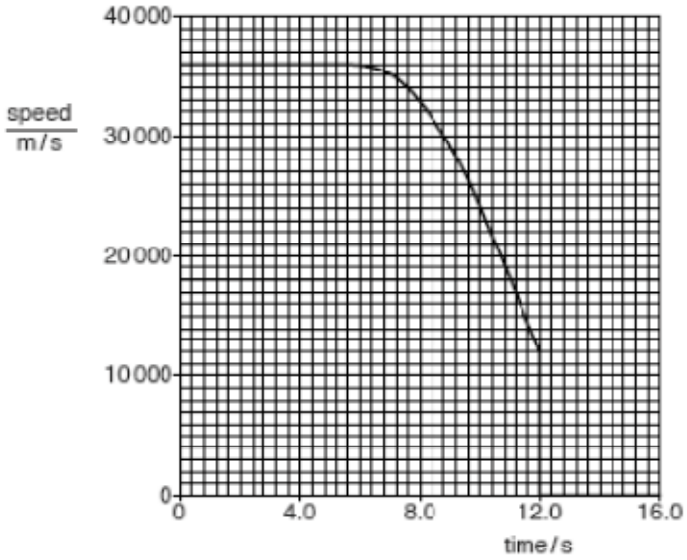


Fig. 1.1

(a) **(I)** During the period $t = 0$ s to $t = 6.0$ s, both the speed of the comet and the velocity of the comet remain constant.

State what this suggests about the motion of the comet.

.....

.....[1]

(II) Determine the distance travelled during the period $t = 0$ s to $t = 6.0$ s.

distance = ...[2]

(b) Explain what the graph shows about the motion of the comet during the period t = 6.0 s to t = 10.0 s.

.....

.....

.....[2]

(c) Determine the acceleration of the comet at t = 11.0 s.

acceleration = ...[2]

(d) Suggest what happens to the comet at t = 12.0 s.

.....

.....[1]
[Total: 8]

2 A student wishes to find the volume of a piece of wood of irregular shape. Her experiment requires the use of a small brass object of mass 200 g.

(a) Calculate the volume of the brass object. The density of brass is 8.4 g / cm^3.

volume = ...[2]

(b) To find the volume of the piece of wood, the student has a measuring cylinder, a supply of water and the brass object in **(a)**. The piece of wood and the brass object are small enough to be placed in the measuring cylinder.

(I) The piece of wood does not sink in water.
Suggest why.

.....[1]

(II) Describe what the student does to find the volume of the piece of wood, stating the measurements that she makes and any calculations required.

.....

.....

.....

.....

.....

.....

.....

.....

.....[4]
[Total: 7]

3 (a) (I) Define *power*.

.....[1]

(II) In the following list, tick the **two** boxes next to the two quantities needed to calculate the work done on an object.

- ☐ mass of the object
- ☐ force acting on the object
- ☐ speed of the object
- ☐ acceleration of the object
- ☐ distance moved by the object [1]

(b) A lift (elevator) in a high building transports 12 passengers, each of mass 65 kg, through a vertical height of 150 m in a time of 64 s.

(I) Calculate the power needed to transport the passengers through this height.

power = ...[4]

(II) The lift (elevator) is driven by an electric motor.

State a reason, other than friction, why the power supplied by the motor is greater than the power needed to transport the passengers.

.....

.....[1]

[Total: 7]

:

4 (a) Fig. 4.1 shows a top view of a tourist vehicle in a game park and two elephants pushing against the vehicle. The two forces indicated are at right angles to each other.

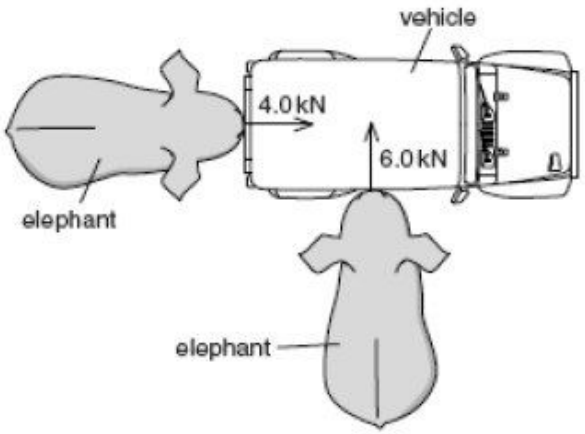


Fig. 4.1

In the space below, draw a scale vector diagram to determine the magnitude of the resultant force. Label the two forces applied and the resultant, and clearly state the scale you use.

magnitude of resultant force = ...[3]

(b) Fig. 4.2 shows another elephant pushing horizontally against a vehicle with a force of 11 kN at a distance 1.8 m above the ground. Point M is the centre of mass of the vehicle.

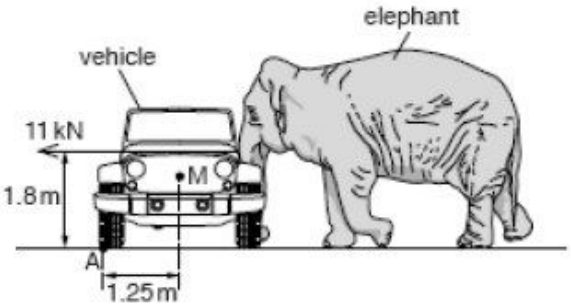


Fig. 4.2

(i) Calculate the moment about point A of the force exerted by the elephant.

moment = ...[2]

(ii) The mass of the vehicle is 1900 kg, and it does not slide when pushed by the elephant.

Determine whether the elephant tips the vehicle over. Show your working.

Calculation

conclusion .....[2]

[Total: 7]

5 (a) X and Y are liquid-in-glass thermometers. The scale of each thermometer starts at 0 °C.
X has a large range, good linearity and high sensitivity.

Y has a small range, poor linearity and low sensitivity.

Explain what is meant by

(i) the difference in their *ranges*,

.....

.....

(iii) the difference in their *linearities*,

.....

.....

(iv) the difference in their *sensitivities*.

.....

..... [3]

(b) A thermocouple is used to measure the temperature of a small volume of liquid.

(i) Draw and label a sketch of the arrangement.

[3]

(ii) The temperature of the liquid is changing rapidly.

Explain why the thermocouple is able to respond quickly to this rapid change.

.....

.....

..... [2]

[Total: 8]

6 (a) In the space below, draw a simple labelled diagram of the apparatus used to demonstrate Brownian motion.

[2]

(b) State what is observed.

.....

.....

.....[2]

(b) Explain what is observed in terms of molecules.

.....

.....

.....

.....[2]

[Total: 6]

7 Sound from a loudspeaker is travelling in air towards a solid wall.
Fig. 7.1 shows compressions of the incident sound wave and the direction of travel of the wave.

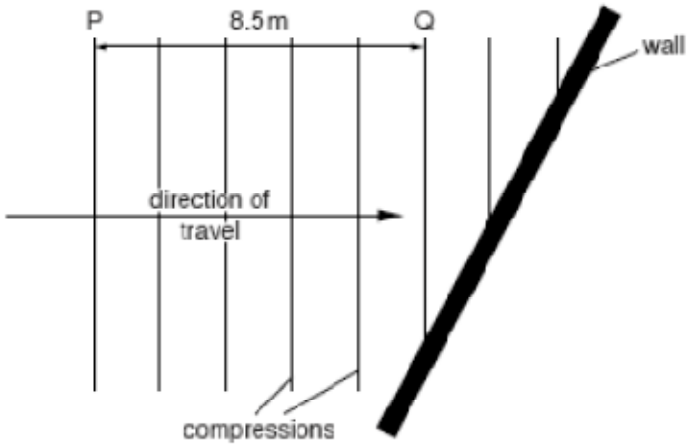


Fig. 7.1

(a) State what is meant by a *compression*.

.....

.....[1]

(b) The distance from point P to point Q is 0.5 m. It takes 25 ms for the compression at P to reach Q.

For this sound wave, determine

(i) the wavelength,

wavelength = ...[1]

(ii) the frequency.

frequency = ...[2]

(c) As it strikes the wall, the sound reflects.
Complete Fig. 7.1 to show the positions of three compressions of the reflected sound wave. [2]

(d) The loudspeaker is immersed in water, where it continues to produce sound of the same frequency.
State and explain how the wavelength of the sound wave in water compares with the wavelength determined in **(b)(i)**.

.....

.....

.....[2]
[Total: 8]

8 (a) Fig. 8.1 is a ray diagram of a convex lens being used as a magnifying glass to produce a virtual image.

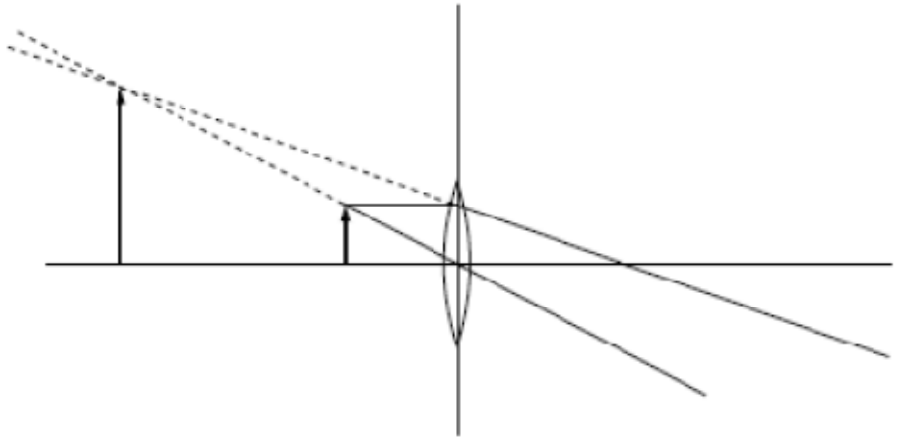


Fig. 8.1

On Fig. 8.1,

(I) label the object O,

(II) label the image I,

(III) label a principal focus F,

(Iv) put arrows on the two rays to indicate their directions. [4]

(b) Fig. 8.2 shows a ray of light in air incident on an interface with glass. The refractive index of glass is 1.5.

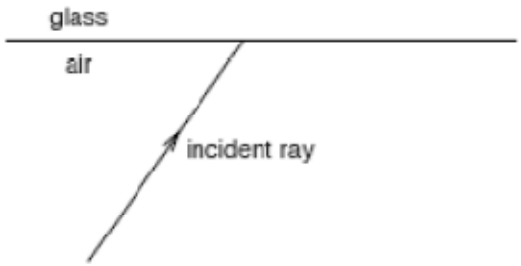


Fig. 8.2

On Fig. 8.2, accurately draw the ray as it travels in the glass. You will need to take a measurement from Fig. 8.2 and carry out an appropriate calculation. Show your working. [3]

[Total: 7]

9 Define *specific latent heat of fusion*.

.....

.....

..... [1]

(b) (i) A tray of area 0.25 m2, filled with ice to a depth of 12 mm, is removed from a refrigerator.

Calculate the mass of ice on the tray. The density of ice is 920 kg / m^3.

mass = ... [2]

(ii) Thermal energy from the Sun is falling on the ice at a rate of 250 W / m2. The ice absorbs 60 % of this energy.

Calculate the energy absorbed in 1.0 s by the 0.25 m2 area of ice on the tray.

energy = ... [2]

(i) The ice is at its melting temperature.

Calculate the time taken for all the ice to melt. The specific latent heat of fusion of ice is 3.3 X 10^5 J / kg.

time = ... [3]
[Total: 8]

10 Fig. 10.1 shows the principal axis PQ of a converging lens and the centre line XY of the lens.

Fig. 10.1

An object 2.0 cm high is placed 2.0 cm to the left of the lens. The converging lens has a focal length of 3.0 cm.

(a) On Fig. 10.1, draw a full-scale diagram to find the distance of the image from the lens, and the height of the image.

distance of image from the lens =

height of image = ...
[5]

(b) State and explain whether the image in **(a)** is real or virtual.

.....

.....[1]
[Total: 6]

11 **(a)** State the range of frequencies of sound which can be heard by a healthy human ear.

..... [1]

(b) Compressions and rarefactions occur along the path of sound waves.

State, in terms of the behaviour of molecules, what is meant by

(i) a *compression*,

.....

.....

(ii) a *rarefaction*.

.....

.....

[2]

(c) State the effect on what is heard by a listener when there is

(i) an increase in the amplitude of a sound,

..... [1]

(ii) a decrease in the wavelength of a sound.

..... [1]

(d) A student carries out an experiment to find the speed of sound in air.

He stands facing a high cliff and shouts. He hears the echo 1.9 s later.

He then walks 250 m further away from the cliff and shouts again, hearing the echo 3.5 s later. Calculate the speed of sound given by this experiment.

speed = ... [3]

[Total: 8]

ASSIGNMENT 2:

(a) What are the various hazards of Electricity?

(b) What will you do to avoid them?

(c) Discuss the use of (i) Fuse (ii) RCD. How are they used in a circuit?

ENVIRONMENTAL MANAGEMENT

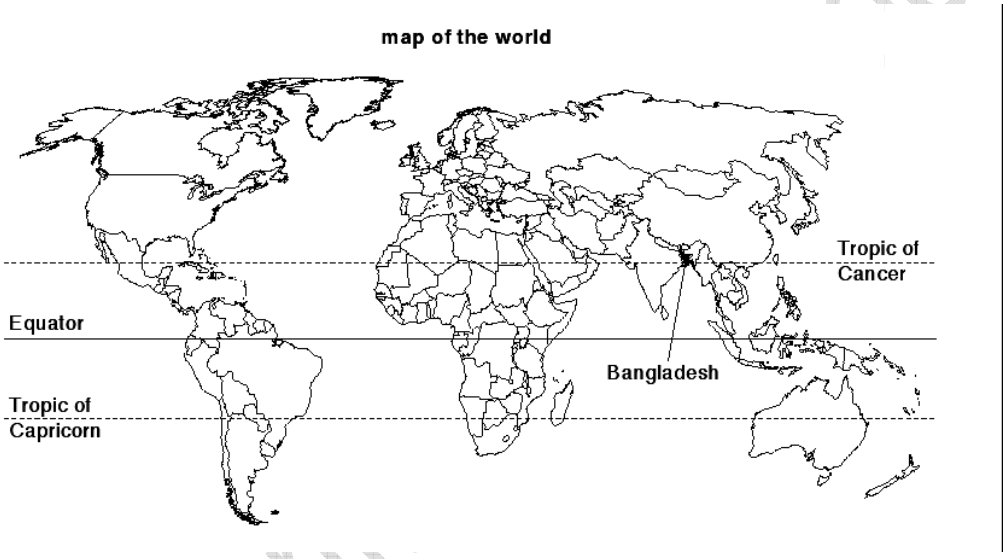
Q. 1 You need to do the research on the topic mentioned below and present the report as per points mentioned below:

Causes and impacts(Social and Environmental) of forest fires in Uttarakhand

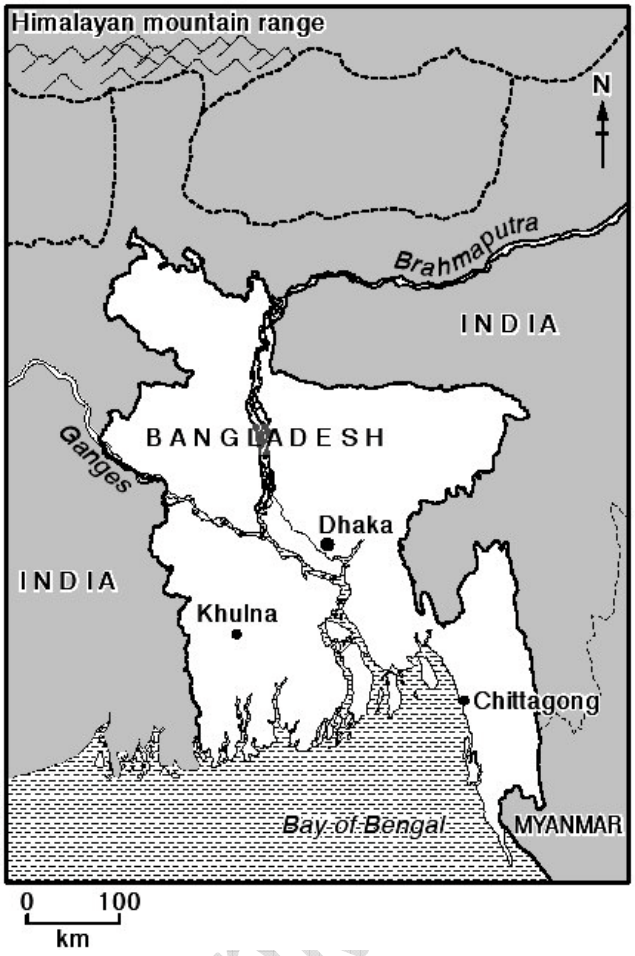
This research should be compiled in a folder having

- 5-10 pages
- data and pictures stating the impact
- response of the government and people to the disaster.

Q2 Practice questions from past papers



map of Bangladesh



Area of Bangladesh: 144 000 sq km

Population: 164 million

Children per woman: 2.5

Life expectancy: 70 years

Currency: Taka (85 BDT = 1 US$)

Language: Bangla, English

Climate: tropical

Terrain: mainly flat low-lying plain, hilly in south east

Main exports: clothing, agricultural products, frozen seafood, jute and leather

1 Bangladesh is a developing country with an annual economic growth rate of seven percent. Most of the population live in rural communities and work on the land. People living in the coastal region are particularly at risk from cyclones.

(a) Describe the effects of cyclones on coastal communities.

.....

.....

.....

.....

.....

.....[3]

(b) Dhaka, the capital city, had a large population estimated to be 15.5 million people in 2014.

(i) Suggest reasons why the population of Dhaka can only be estimated.

.....

.....

.....

.....

.....

.....[3]

(ii) The population of the three largest cities is shown below.

city	population / millions
Dhaka	15.5
Chittagong	4.0
Khulna	1.5

Calculate the percentage of the total population of Bangladesh that live in the three largest cities.

Space for working.

..... % [2]

(iii) The population of Dhaka continues to increase and building materials are always in demand. Bangladesh has about six thousand brick factories that continually supply new bricks. The process of brick making is shown below.

- mud is dug out of the ground
- the mud is placed in a mould
- the moulded brick is turned out to air dry
- air-dried bricks are stacked in a kiln
- the kiln is heated by burning coal to harden (fire) the bricks
- the finished bricks are stacked for delivery

Each brick factory has a small labour force that lives near the kiln. Bricks can only be made for five months of the year. A weather station near some brick factories recorded the following data.

month	J	F	M	A	M	J	J	A	S	O	N	D
average temperature / °C	25	28	33	35	34	32	31	31	31	31	29	26
average rainfall / mm	18	31	58	103	194	321	437	305	254	169	28	2
average number of wet days	1	1	3	6	11	16	12	16	12	7	1	1
relative humidity / %	44	37	38	42	60	72	72	74	71	65	53	48

In which five months does brickmaking take place? Use information from the table to support your answer.

.....

.....

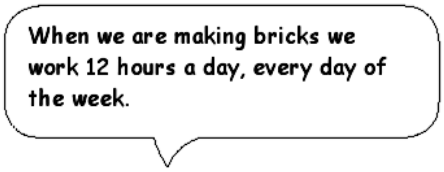
.....

.....

.....

.....[3]

(iv) One brickmaker said,



How many hours a week do brickmakers work?

.....[1]

(v) Suggest why the brickmakers have to work every day of the week.

.....

.....

.....

.....[2]

(c) A student carried out a survey of the production from five brick factories in one year. The results are shown in the table.

factory	number of workers	coal used / tonnes	number of bricks made / millions	average selling price of bricks made / 1000 Taka
A	69	960	3.5	14150
B	56	616	2.8	13800
C	68	690	3.0	14000
D	78	840	4.0	14250
E	64	704	3.2	13900
average	.....	.....	.....	.....

(i) Complete the table. [2]

(ii) Which factory used the least coal?

.....

Which factory made the most bricks?

.....

Which factory had the lowest selling price?

.....

[3]

(iii) The student decided to find out how many bricks could be made for every tonne of coal used at each factory.

factory	number of bricks made / million	coal used / tonnes	number of whole bricks per tonne of coal
A	3.5	960	3645
B	2.8	616	4545
C	3.0	690	4347
D	4.0	840	.....
E	3.2	704	.....

Complete the table. [2]

(iv) Suggest what the student decided about how efficiently coal was used in the five factories.

.....

.....

.....

.....

.....

.....[3]

(d) (i) About half of the six thousand brick factories use coal as the source of energy to make bricks. Suggest the possible environmental problems caused by burning coal.

.....

.....

.....

.....

.....

.....[3]

(ii) Explain, using the map information on page 2, why the factories have a sustainable supply of mud for making bricks.

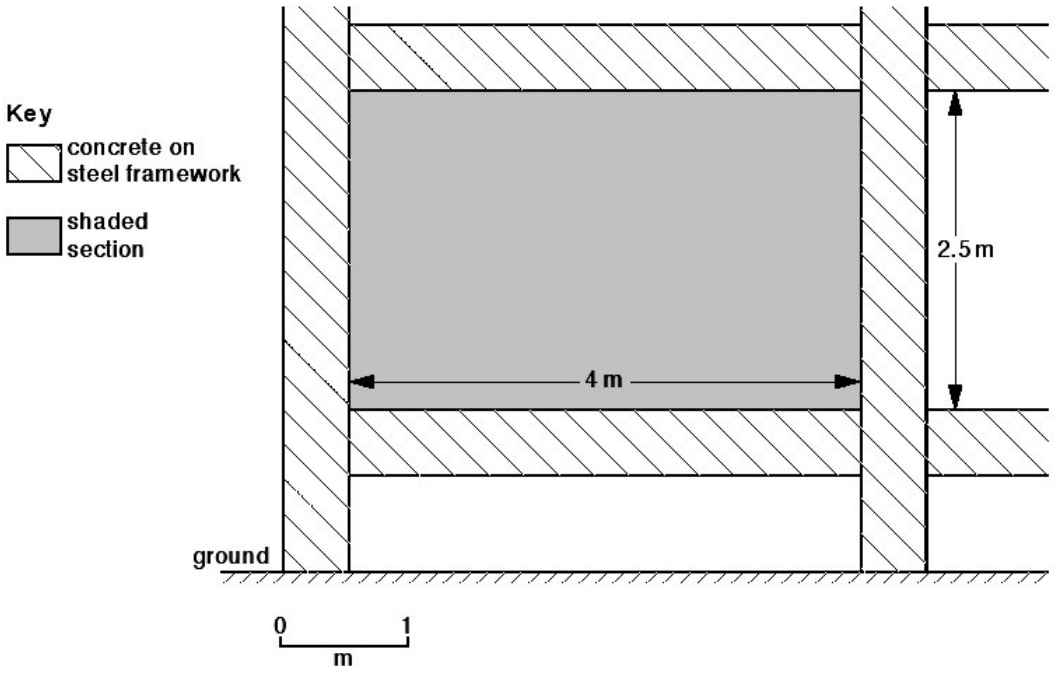
.....

.....

.....

.....[2]

(e) Most of the bricks are taken by truck to building sites in Dhaka. New buildings start with a steel and concrete frame. Each section of the frame is then filled in with brickwork.



(i) Bricklayers use the rule of 50 bricks per square metre when building walls. How many bricks are needed to completely fill the shaded section shown in the diagram?

Space for working.

..... [1]

(ii) How many bricks are needed to complete four sections of wall?

Space for working.

..... [1]

(iii) Suggest why bricklayers usually order 10 percent more bricks than the minimum needed to complete a wall.

.....

.....[1]

(f) The government does not want bricks to be imported from other countries. Suggest reasons why the government takes this view.

.....

.....

.....

.....

.....

.....[3]

SPANISH

Paper 2 Reading /21 May'2010

Paper 3 Speaking Role play Cards 1,2,3,4 May'2010

Paper 4 Continuous Writing /43 May'2010

Printed copies already given to students.

INTERNATIONAL MATHS

A INVESTIGATION FRACTIONS WITHIN FRACTIONS (20 marks)

You are advised to spend no more than 45 minutes on this part.

This investigation looks at sequences of fractions.

One way to form a sequence is by using fractions within fractions as shown below.

$\frac{1}{1}$ then $\frac{1}{1+\frac{1}{1}}$ then $\frac{1}{1+\frac{1}{1+\frac{1}{1}}}$ then $\frac{1}{1+\frac{1}{1+\frac{1}{1+\frac{1}{1}}}}$ and so on.

1 The first three terms of a sequence of fractions are $1, \frac{1}{2}, \frac{2}{3}$.

These terms are calculated in the following way.

$$\frac{1}{1} = 1$$

$$\frac{1}{1+\left(\frac{1}{1}\right)} = \frac{1}{1+(1)} = \frac{1}{2}$$

$$\frac{1}{1+\left(\frac{1}{1+\frac{1}{1}}\right)} = \frac{1}{1+\left(\frac{1}{2}\right)} = \frac{1}{\frac{3}{2}} = \frac{2}{3}$$

(a) Fill in the box to complete the calculation of the 4th term.

$$\frac{1}{1+\frac{1}{1+\frac{1}{1+\frac{1}{1}}}} = \frac{1}{1+\frac{1}{1+\frac{1}{2}}} = \frac{1}{1+\frac{1}{\frac{3}{2}}}$$

$$= \boxed{} = \frac{1}{\frac{5}{3}}$$

$$= \frac{3}{5}$$

(b) Show that the 5th term of this sequence of fractions is $\frac{5}{8}$.

$$\frac{1}{1+\frac{1}{1+\frac{1}{1+\frac{1}{1+\frac{1}{1}}}}} =$$

(c) Complete the table to show the first eight terms of this sequence of fractions.

$\frac{1}{1}$	$\frac{1}{2}$	$\frac{2}{3}$	$\frac{3}{5}$	$\frac{5}{8}$		$\frac{13}{21}$	

(d) Explain how you used a pattern to find the numerator and the denominator of the 8th term.

Numerator .....

Denominator .....

2 Here is a different sequence of fractions. The first three terms are 2, $\frac{2}{3}$, $\frac{6}{5}$.

(a) Calculate the 4th and 5th terms.
Give your answers as single fractions.

$\frac{2}{1}$ = $\frac{2}{1}$

$\frac{2}{1+\frac{2}{1}}$ = $\frac{2}{3}$

$\frac{2}{1+\frac{2}{1+2}}$ = $\frac{2}{1+\frac{2}{3}}$ = $\frac{6}{5}$

$\frac{2}{1+\frac{2}{1+\frac{2}{1+2}}}$ = $\frac{2}{1+\frac{6}{5}}$ = ...

$$\cfrac{2}{1+\cfrac{2}{1+\cfrac{2}{1+\cfrac{2}{1+2}}}} = \ldots\ldots\ldots\ldots\ldots\ldots$$

(b) Explain how you can use a pattern to find the numerator and the denominator of the 5th term of this sequence.

Numerator .....

Denominator .....

3

You may find this formula useful in this question.

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

As more terms in these sequences of fractions are calculated the difference between the terms becomes smaller and smaller.
This means that the terms become nearly equal to the same number.
This number is called the limit of the sequence.

(a) In the sequence in **question 1** all the terms after the 7th term are the same when written correct to 3 decimal places.

If x is a fraction in the sequence in **question 1** then the next fraction is $\frac{1}{1+x}$.

In this case the sequence reaches its limit when $x = \frac{1}{1+x}$.

(i) Show that $x = \frac{1}{1+x}$ can be rearranged to give the quadratic equation $x^2 + x - 1 = 0$.

(ii) Solve $x^2 + x - 1 = 0$ and write down the positive decimal solution, correct to 3 decimal places.

.....

(iii) Complete the table for the sequence in **question 1**.

Fraction	$\frac{1}{1}$	$\frac{1}{2}$	$\frac{2}{3}$	$\frac{3}{5}$	$\frac{5}{8}$		$\frac{13}{21}$	
Decimal	1	0.5	0.667	0.6	0.625		0.619	

(b) (i) Complete the table for the sequence in **question 2**.

Fraction	$\frac{2}{1}$	$\frac{2}{3}$	$\frac{6}{5}$			$\frac{42}{43}$	$\frac{86}{85}$
Decimal	2	0.667	1.2			0.977	1.012

(ii) Solve $x = \frac{2}{1+x}$ for $x > 0$.

(iii) Explain the connection between the decimals in **part (b)(i)** and your answer to **part (b)(ii)**.

(c) The positive solution of $x = \frac{N}{1+x}$ gives the limit of these sequences of fractions.

(i) $x = \frac{N}{1+x}$ can be rearranged to give the quadratic equation $x^2 + x - N = 0$.

Solve $x^2 + x - N = 0$ and write down the positive value of x in terms of N.

.....

(ii) Find three integer values of N that make the limit a positive integer.

.....

B MODELLING FITNESS TRAINING (20 marks)

You are advised to spend no more than 45 minutes on this part.

Viola starts her fitness training. She intends to walk, jog and run to increase her fitness.

1 (a) On day 1 she walks 1.5 km in 20 minutes.

Show that her average walking speed is 4.5 km/h.

(b) On day 2 she increases her average walking speed to 5 km/h.

How many minutes does it take her to walk the 1.5 km?

.....

(c) Viola wants to increase her average walking speed by 0.5 km/h each day.

If she does, on which day will she walk at an average of 6.5 km/h?

.....

2 She now begins to jog as well as walk.
On day 7 she jogs for 20 minutes at 8.1 km/h.

What distance does she jog?

.....

3 From day 10 she trains for one hour.
She walks at an average speed of 6.4 km/h and she jogs at an average speed of 8.1 km/h.
These speeds do not change.

(a) Construct a formula for the total distance, D km, when she walks for x minutes and jogs for the rest of the hour.

.....

(b) Show that your formula simplifies to the model $D = \frac{486 - 1.7x}{60}$.

(c) Sketch the graph of the model in **part (b)** on the axes below, for $0 \leqslant x \leqslant 60$.

(d) What distance will she travel in the hour when she walks and jogs for the same amount of time?

.....

(e) The next month Viola walks for 20 minutes, jogs for 20 minutes and runs for the rest of the hour. She travels a total distance of 9 km.

Work out her average speed when she is running.

.....

(f) The next month Viola walks for x minutes, jogs for y minutes and runs for the rest of the hour. Her average speed when she is running does not change from the value found in **part (e)**.

(i) Extend your model in **part (b)** for the total distance, D km, to include walking for x minutes, jogging for y minutes and running for the rest of the hour.

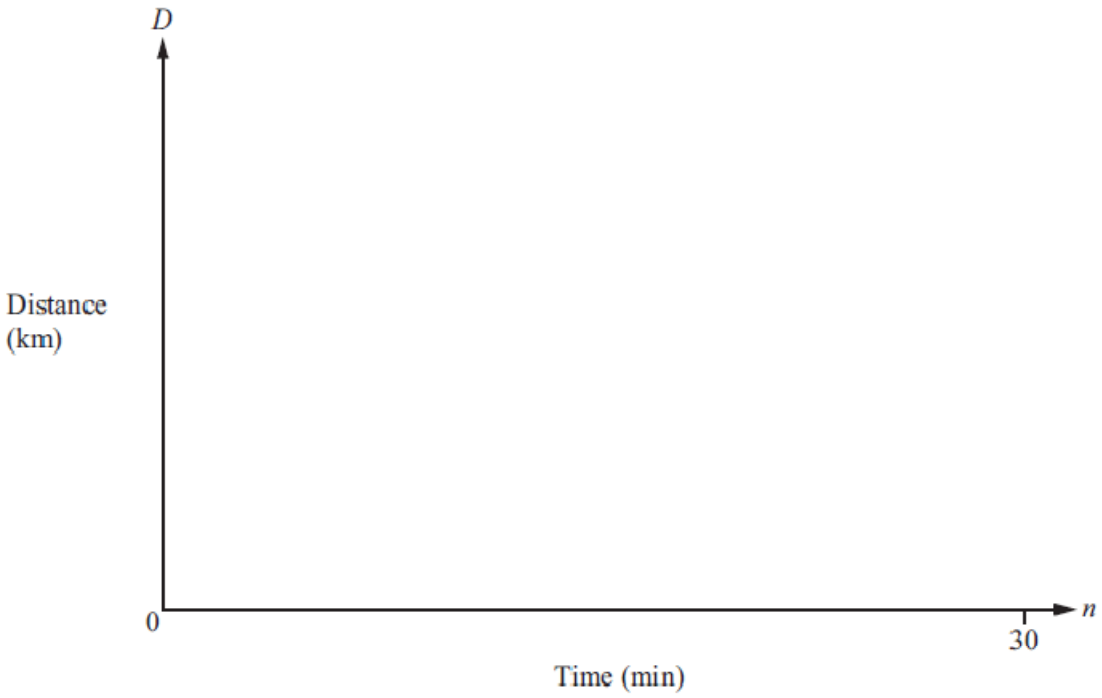
.....

(ii) Show that your model simplifies to $D = \frac{1}{60}(750 - 6.1x - 4.4y)$.

(g) **(i)** Rewrite the model in **part (f)** when Viola's walking and jogging times are both n minutes.

.....

(ii) Sketch the graph of the model in **part (g)(i)** on the axes below, for $0 \leqslant n \leqslant 30$.



(iii) What is Viola doing in her training when $n = 0$?

.....

(iv) What is Viola doing in her training when $n = 30$?

.....

(v) Modify the models in part **(b)** and part **(f)** when Viola spends H hours training.

Model in **part (b)** .....

Model in **part (f)** .....

ESL

1. Write about rain , a rainy day or absence of rain in your city. Make your composition as descriptive as possible by using the five senses. Write about 200 words .Use a separate scrap book for your work.

2. Cut articles from newspaper ,paste them in your scrap book and give your own opinion about each of them .(minimum ten articles)

3. Watch any English movie of your interest and give a review of it in your own words. Also explain why and what you liked about it

4. Make a PPT on any two topics out of the following:

a. Should mobile phones be allowed in class rooms

b. What rules do students break that teachers never find out about?

c. Online education

d. The stress associated with being a student.

5. Read any book of your choice and write about its characters and plot.