

Total number of pages-5

**ATOMIC ENERGY EDUCATION SOCIETY
ANNUAL EXAMINATION -2017-18**

**CLASS – IX
SUBJECT – ENGLISH**

**TIME- 3Hrs
MAX MARKS-80**

General Instructions:

This question paper consists of **three** sections.

Section A – Reading	- 20 marks
Section B – Writing & Grammar	- 30 marks
Section C – Literature & Extended Reading Text	- 30 marks

All sections are compulsory.

**SECTION A
(Reading: 20 marks)**

- 1. Read the passage given below and complete the sentences that follow:
(1x8=8 marks)**

Python, also known as Ajgar (in Hindi), is one of the most massively built snakes of the Indian subcontinent. It is dependent on water to quite an extent. One of the unique features of the Rock Python of India is that it can raise its body temperature above the ambient level through muscular contractions.

Pythons grow to an average length of somewhere around four meters and their weight varies from 70 to 129 pounds. An adult python is white or yellow in colour, depending upon its habitat.

The Rock python of India is a lethargic creature, moving only while hunting a prey or when threatened. It shows great swimming ability and is quite at ease in water.

Pythons can be found in dense as well as open Indian forests, mostly estuarine mangroves, arid scrub-jungles and rain forests. They may live in abandoned mammal burrows, hollow trees, dense water reeds and mangrove thickets. However, pythons prefer to live near a permanent source of water.

This snake typically hunts at night using a combination of heat sensors and chemical receptors to pinpoint and identify target animals. An Indian python most often preys on birds or small mammals, grabbing the animal and holding it with its sharp teeth as it wraps its coils around. The snake then squeezes tightly until the prey dies, after which it swallows the creature whole. It may go weeks or even months between meals.

The Rock python of India is an endangered species, now partly protected by the Tamil Nadu Government. The reason for this is that it is killed for its fine skin, meat and even for medicinal purpose. Due to destruction and filling of medium and large water bodies, habitat of Python remains no more natural and it has to migrate from the area. Like all Pythons, Indian Rock Python is always demanded by foreign and Indian keepers for pet trade.

- a) With the help of muscular contractions the Rock Pythons -----
- b) The colour of an adult python varies according to -----
- c) It is said that pythons are very lazy because they -----
- d) A python identifies its prey using -----
- e) The specific places the pythons choose to live in are -----
- f) After one meal, a python need not eat for -----
- g) Pythons are endangered because they are killed for
- h) Find the word from para-1 that means 'relating to the surrounding area'.

2. Read the passage given below and answer the questions that follow: (12 marks)

Pleasure and pain are the inseparable facets of human existence. While the experience of our well being is rather vague and intangible, the experience of pain is real and affects our body, mind and spirit, altering our lives in more ways than one. Pain is an unpleasant, sensory and emotional experience caused by tissue damage that results from physical trauma, burns, illness, injury or surgery. Despite the agony caused by pain, it is essential for our survival. If you don't feel pain, you could cause great harm to your body by inadvertently touching a hot iron or jamming your finger in the drawer and not even know it. Or you could rupture the appendix and be unaware of what is going on inside your body. Pain rings an alarm bell, alerting you to pay immediate attention and take quick action.

Have you ever wondered why a severely wounded soldier continues to battle on so defiantly or an athlete injured during a race goes on to win it? It happens so because the brain does not react immediately to the pain signals, the sufferer just ignores them because there are more important tasks to attend. The pain registers only after the task or event is over. The perception of pain has been studied extensively by psychologists who suggest that there is a 'gating system' in the central nervous system that opens and closes to let pain pass through to the brain or block it. Psychological factors such as attention to pain, emotional state of a person, anticipation of pain and the way that the person interprets a situation can both open and close the 'gates'. This is why when you are depressed or anxious your pain seems worse and intolerable – because your feelings can open the pain gate. On the other hand, when your attention is diverted or focused on pleasant tasks, your pain is almost intangible. Thus the physical cause of the pain may be the same, the pain circuits identical, yet the perception of pain is dramatically different.

There is physical evidence, based on Magnetic Resonance Imaging scans, that shows an abnormal amount of stimulation in the brains of chronic pain patients. That means people with chronic pain physically perceive and feel pain more intensely than others.

A. Answer the questions in 30-40 words (2x4= 8 marks)

- a) When do we feel pain? (2 marks)
- b) In what way is pain a blessing? (2 marks)
- c) What is 'gating system'? (2 marks)
- d) What are the factors that control the gating system? (2 marks)

B.

- a. Find the word which means “unknowingly”. (para-1) (1 mark)
- b. Find the word which means “that exists but is difficult to understand or describe”. (para-2) (1 mark)
- c. Which word is opposite in meaning to ‘submissively’. (para-2) (1 mark)
- d. What is the noun form of ‘central’? (1 mark)

SECTION B

(WRITING & GRAMMAR: 30 Marks)

3. You attended a workshop on ‘**Importance of having self awareness and realization**’ organized by your school. It was a new experience for you. The resource persons explained about the need of introspection to analyze yourself and to understand the strengths and weaknesses so that you can succeed in life by changing your attitude in general. **Write a page in your diary** describing your experience and in what way you are going to implement what you have learnt. (100 – 120 words) (8 marks)

4. Complete the story **with a suitable title** in about 200-250 words. The beginning is given for you.

“It was ariny day and I was all alone at home. It was pitch dark outside and suddenly I heard a knock on the door.....” (12 marks)

5. **Fill the blanks choosing the suitable options given below. Write only the correct answer against the correct blank number in your answer sheet. Do NOT copy the whole passage. (1/2x8 = 4marks)**

Yaks (1) _____ heavily built animals (2) _____ a bulky frame (3) _____ extremely dense, long fur that hangs down lower (4) _____ the belly. They are prone to suffering (5) _____ heat exhaustion (6) _____ 15⁰ C. Butter made of yak’s milk is (7) _____ ingredient of (8) _____ butter tea that Tibetans consume.

- | | | | |
|--------------|-----------|----------|-------------|
| 1) (a) have | (b) has | (c) is | (d) are |
| 2) (a) in | (b) by | (c) with | (d) of |
| 3) (a) or | (b) and | (c) but | (d) besides |
| 4) (a) than | (b) to | (c) by | (d) then |
| 5) (a) from | (b) at | (c) of | (d) by |
| 6) (a) below | (b) above | (c) in | (d) at |
| 7) (a) the | (b) a | (c) an | (d) some |
| 8) (a) a | (b) their | (c) any | (d) the |

6. Edit the following passage. There is one error in each line. Write the incorrect word, followed by the correct word as shown in the example. Do **NOT** copy the whole passage. (1/2 x 6 = 3)

	Incorrect Word	Correct Word
Feelings of patriotism arised when a cricket match	e.g. arised	<u>arise</u>
is playing between India and Pakistan or when there	a)	
is a terrorist bombing in an train or hotel. People pray	b)	
for India. This is how the Indians show there love for	c)	
the motherland. Where do this love for motherland go	d)	
when we threw rubbish out of the car window or when	e)	
we smoking in the public places?	f)	

7. Re arrange the jumbled words into meaningful sentences. The first one is done for you. (3 marks)

e.g. are / in life / when / succeed / confident / you / only / you /
You succeed in life only when you are confident.

- a) be / and intelligent / you / rich / may / efficient,
- b) you / come / speak / cannot / if you / but / confidence, / out and / don't have
- c) all your / very important / hence, / hard work, / is / apart from / self confidence

SECTION- C
(LITERATURE & LONG READING TEXT: 30 Marks)

8. Read the following extract and answer the questions. (4 marks)

“I – I – didn't believe there was any good in the world; one doesn't when one has been in Hell; but somehow I – I – know you're good, and it's a queer thing to ask, but.....”

- a) Who are 'I' and 'you' in the above lines? (1 mark)
- b) What does 'Hell' refer to here? (1 mark)
- c) Why does the speaker feel that the listener is good? (1 mark)
- d) What is the queer thing the speaker wants to ask? (1 mark)

OR

“Full of strange oaths, and bearded like the pard
Jealous in honour, sudden and quick in quarrel
Seeking the bubble reputation
Even in the cannon's mouth.”

- a) Which stage of a person's life does Shakespeare describe here? (1 mark)
- b) Why is reputation called a bubble? (1 mark)
- c) What is the poetic device used in the line '**... and bearded like a pard**'? (1 mark)
- d) What is meant by '**sudden and quick in quarrel**'? (1 mark)

9. Answer any four of the following questions in about 30–40 words. (4x2=8 mark)

- 1) What did Harold's parents try to hide from him? Why did they do so?
- 2) Gaston was not interested in buying the villa. Then why did he change his mind?
- 3) How does the rain act as a messenger of mercy?
- 4) John A Pescud was a hypocrite. Do you agree? Explain.
- 5) What kind of a lady was Sudha Murthy's grandmother?
- 6) How does Wordsworth compare the song of the solitary reaper?

10. Answer in about 100 – 120 words. (8 mark)

"Forgiveness is the best weapon to conquer the world." Explain with reference to the story of the Bishop's Candlesticks.

OR

"A stitch in time saves nine." Substantiate this proverb in the light of the poem '**I wish I'd looked after me teeth**'.

11. Answer any one of the following in about 150 – 200 words. (10 marks)

Narrate the fun the three men had in preparing the Irish stew.

OR

Write a character sketch of Harris.

OR

Why was Gulliver accused of treason in the country of Lilliput? How did he manage to escape the punishment?

OR

How does Swift express his hatred of mankind through his description of the Yahoos?

परमाणु ऊर्जा शिक्षण संस्था

वार्षिक परीक्षा—2018

कक्षा—9

समय — 3 घण्टे

विषय—हिन्दी

पूर्णांक — 80

निर्देश — (i) इस प्रश्न पत्र के चार खण्ड हैं।

(ii) यथासम्भव प्रत्येक खण्ड के उत्तर क्रमशः दीजिए।

(खण्ड—क)

प्र0-1. निम्नलिखित गद्यांश को ध्यानपूर्वक पढ़कर पूछे गए प्रश्नों के उत्तर दीजिए—

जीवन में वही मनुष्य सफल है, जो समय के साथ चलता है। कुछ लोग तो ऐसे दूरदर्शी होते हैं, जो आने वाले समय को पहले ही भाँप जाते हैं। ऐसे व्यक्ति अपनी योजना पहले ही बना लेते हैं तथा हर कसौटी पर सफल होते हैं। हमें समय के साथ आगे ही बढ़ते हुए अपना काम पूरा करते रहना चाहिए। कल के भरोसे काम को छोड़ना समस्याओं को आमंत्रित करना है। समय बड़ा ही बलवान होता है। समय के अनुरूप चलने वाला गरीब से अमीर बन जाता है, जबकि समय को ठीक से न भाँपने वाला अमीर से कंगाल बन जाता है। प्रत्येक व्यक्ति के जीवन में कुछ ऐसे क्षण आते हैं, जिनसे उसके भाग्य का बनना और बिगड़ना तय होता है अगर व्यक्ति ने समय की सही गति या दिशा को समझ लिया, तब तो वह सफल हो गया, अन्यथा उसके हाथ केवल असफलता ही लगेगी। खेलकूद, खासकर दौड़ की प्रतियोगिताओं में समय ही सर्वाधिक निर्णायक होता है। कल्पना चावला को ले जाने वाला अंतरिक्ष यान कोलंबिया यदि कुछ मिनट और ठीक रहता, तो शायद वे और उनके सभी साथी अंतरिक्ष यात्री सुरक्षित बच जाते। अतः हम कह सकते हैं कि मानव जीवन का सबसे बड़ा नियामक घटक समय ही है।

1. दूरदर्शी व्यक्ति सफल क्यों होते हैं? (2)
2. समय के साथ नहीं चलने वाले का क्या परिणाम होता है? (2)
3. मानव जीवन का सबसे बड़ा नियामक घटक क्या है और कैसे है? (2)
4. स्वयं पर निर्भर रहने वाला आत्मनिर्भर है, तो 'दूर की सोचनेवाला' क्या होगा? (1)
5. अंतरिक्ष यान कोलंबिया में भारतीय मूल की महिला अंतरिक्ष यात्री कौन थी? (1)

प्र0-2. निम्नलिखित काव्यांश को पढ़कर पूछे गए प्रश्नों के उत्तर दीजिए —

मैं मजदूर मुझे देवों की बस्ती से क्या!
अगणित बार धरा पर मैंने स्वर्ग बनाए
अंबर पर जितने तारे उतने वर्षों से
मेरे पुरखों ने धरती का रूप सँवारा
धरती को सुंदरतम करने की ममता में
बिता चुका है कई पीढ़ियाँ वंश हमारा

अपने नहीं अभाव मिटा पाया जीवन भर,
पर औरों के सभी अभाव मिटा सकता हूँ
युगों-युगों से इन झोपड़ियों में रहकर भी,
औरों के हित लगा हुआ हूँ महल सजाने,
ऐसे ही मेरे कितने साथी भूखे रह,
लगे हुए हैं औरों के हित अन्न उगाने,
इतना समय नहीं मुझको जीवन में मिलता,
अपनी खातिर सुख के कुछ समान जुटा लूँ
और अभी आने वाली सदियों में,
मेरे वंशज धरती का मिलकर उद्धार करेंगे
इस प्यासी धरती के हित में ही लाया था,
हिमगिरि चीर सुखद गंगा की निर्मल धारा

1. कविता के लिए उपयुक्त शीर्षक लिखिए। (1)
2. 'देव' और 'अंबर' शब्दों के दो-दो पर्यायवाची शब्द लिखिए। (2)
3. मजदूरों की कई पीढ़ियाँ निरंतर किस कार्य में लगी हुई हैं? (1)
4. अगणित बार धरा पर स्वर्ग बनाने से कवि का क्या अभिप्राय है? (1)
5. गंगा की निर्मल धारा को कौन, कहाँ से और किस लिए ले आए? (2)

(खण्ड-ख)

प्र0-3. (i) निर्देशानुसार उत्तर दीजिए - (1x4 = 4)

- क) उच्चारण शब्द में प्रयुक्त उपसर्ग व मूल शब्द लिखिए।
- ख) सम् उपसर्ग से दो शब्द बनाइए।
- ग) सफलता शब्द में प्रयुक्त मूल शब्द व प्रत्यय लिखिए।
- घ) इक प्रत्यय से दो शब्द बनाइए।

(ii) निम्नलिखित समस्त पदों का विग्रह कर समास का भेद लिखिए- (1x3 = 3)
देशवासी, राजा-प्रजा, नीलकंठ।

प्र0-4. (i) अर्थ के आधार पर वाक्य भेद बताइए- (1x2 = 2)

- क) आपकी यात्रा मंगलमय हो।
- ख) रात के समय तुम्हें घर से बाहर नहीं निकलना चाहिए।

(ii) निर्देशानुसार वाक्य परिवर्तन कीजिए- (1x2 = 2)

- क) सभी बच्चे खेलते हैं। (आज्ञावाचक)
- ख) आज तो मजा आ गया। (विस्मयवाचक)

प्र0-5. अलंकार बताइए - (1x4 = 4)

- क) काली घटा का घमंड घटा।
- ख) विज्ञान-यान पर चढ़ी हुई सभ्यता डूबने जाती है।
- ग) मेघ आए बड़े. बन-ठन के सँवर के।
- घ) प्रातः नभ था बहुत नीला शंख जैसे।

(खण्ड-ग)

प्र0-6. निम्नलिखित गद्यांश को ध्यानपूर्वक पढ़कर पूछे गए प्रश्नों के लिए सही उत्तर लिखिए-

सन् 57 के सितंबर मास में अर्द्ध रात्रि के समय चाँदनी में एक बालिका स्वच्छ उज्ज्वल वस्त्र पहने हुए नाना साहब के भग्नावशिष्ट प्रासाद के ढेर पर बैठी रो रही थी। पास ही जनरल अउटरम की सेना भी ठहरी थी। कुछ सैनिक रात्रि के समय रोने की आवाज सुनकर वहाँ गये। बालिका केवल रो रही थी। सैनिकों के प्रश्न का कोई उत्तर न देती थी।

- (i) रोती हुई बालिका कौन थी और वह कहाँ बैठी रो रही थी ? (2)
- (ii) बालिका सैनिकों के प्रश्नों के उत्तर क्यों नहीं दे रही थी ? (2)
- (iii) उज्ज्वल शब्द का संधि विच्छेद कीजिए। (1)

प्र0-7. निम्नलिखित प्रश्नों में से किन्हीं चार प्रश्नों के उत्तर दीजिए- (2x4 = 8)

- (i) आपके अनुसार वस्तुओं को खरीदने का आधार वस्तु की गुणवत्ता होना चाहिए या उसका विज्ञापन? तर्क देकर स्पष्ट करें।
- (ii) लेखक जाबिर हुसैन ने साँवले सपनों की याद पाठ में अंतहीन सफर किसे कहा है और क्यों?
- (iii) महादेवी जी के संबंध में उनके बाबा के कैसे विचार थे? मेरे बचपन के दिन पाठ के आधार पर लिखिए।
- (iv) प्रेमचंद के फटे जूते पाठ में प्रेमचंद फोटो में कैसे नजर आ रहे हैं?
- (v) गुरुदेव द्वारा मैना को लक्ष्य करके लिखी कविता के मर्म को लेखक कब समझ पाया? एक कृत्ता और एक मैना पाठ के आधार पर लिखिए।

प्र0-8. निम्नलिखित काव्यांश को पढ़कर दिए गए प्रश्नों के उत्तर दीजिए- (5)

आगे-आगे नाचती - गाती बयार चली,
दरवाजे-खिड़कियाँ खुलने लगीं गली-गली,
पाहुन ज्यों आए हों गाँव में शहर के।
पेड़ झुक झँकने लगे, गरदन उचकाए,
आँधी चली धूल भागी घाघरा उठाए,
बाँकी चितवन उठा, नदी ठिठकी, घूँघट सरके।
मेघ आए बड़े बन -ठन के सँवर के।

- (i) मेघ किस रूप में आए?
- (ii) मेघों का स्वागत किस प्रकार किया गया ?
- (iii) मेघों को किसके समान माना गया है?

प्र0-9. निम्नलिखित प्रश्नों में से किन्हीं चार प्रश्नों के उत्तर संक्षेप में दीजिए- (2x4 = 8)

- (i) ईश्वर प्राप्ति के लिए बहुत से साधक हठयोग जैसी कठिन साधना भी करते हैं, लेकिन उससे भी लक्ष्य प्राप्ति क्यों नहीं होती?
- (ii) कवि रसखान का ब्रज के वन, बाग और तालाब को निहारने के पीछे क्या कारण हैं?
- (iii) कवि सुमित्रानंदन पंत ने गाँव को हरता जन मन क्यों कहा है?

- (iv) दिन प्रतिदिन के जीवन में हर कोई बच्चों को काम पर जाते देख रहा है, फिर भी किसी को कुछ अटपटा नहीं लगता। इस उदासीनता के क्या कारण हो सकते हैं?
- (v) अलसी के लिए हठीली विशेषण का प्रयोग क्यों किया गया है? चंद्र गहना से लौटती बेर कविता के आधार पर बताइए।

प्र0-10. इस जल प्रलय में पाठ में लेखक ने किसका वर्णन किया है? लोग किस तरह तैयारी करने लगे? आप होते तो क्या करते ? (4)

अथवा

रीढ़ की हड्डी एकांकी में अपनी बेटी का रिश्ता तय करने के लिए रामस्वरूप उमा से किस प्रकार के व्यवहार की अपेक्षा करता है? वह उचित क्यों नहीं है? लड़कियाँ अपने अधिकारों से परिचित हों, उसके लिए आप क्या-क्या सुझाव देना चाहेंगे?

(खण्ड-घ)

प्र0-11. निम्नलिखित विषयों में से किसी एक विषय पर निबंध लिखिए(कम से कम 200 शब्दों में) (10)

- (i) बढ़ती आबादी : विकट समस्या
संकेत बिन्दु – भूमिका, आबादी बढ़ने के कारण, आबादी बढ़ने से उत्पन्न समस्याएँ, जनसंख्या रोकने के उपाय, उपसंहार
- (ii) छात्र और अनुशासन
संकेत बिन्दु— भूमिका, जीवन का आरंभिक काल, अनुशासित जीवन, अनुशासनहीनता के कारण, उपसंहार
- (iii) प्रकृति और हम
संकेत बिन्दु— भूमिका, मनुष्य, प्राकृतिक शक्ति का संवाहक, कवियों की दृष्टि में प्रकृति, मनुष्य के लिए आनंद का साधन, मानव द्वारा प्रदूषण, उपसंहार

प्र0-12 बिजली एवं पेयजल की समस्या पर समाचार पत्र के संपादक को पत्र लिखिए। (5)

अथवा

आपकी अपने प्रिय मित्र से किसी बात पर अनवन हो गई थी किंतु अब आपको अपनी गलती का अहसास हो गया है। अतः उसे मनाने के लिए पत्र लिखिए।

प्र0-13 परीक्षा से पहले दो मित्रों के बीच हुई बातचीत को संवाद रूप में लिखिए। (5)

**ATOMIC ENERGY EDUCATION SOCIETY
ANNUAL EXAMINATION, MARCH - 2018**

Class - IX
Subject : MATHEMATICS

Time allowed: 3 hours
Maximum Marks: 80

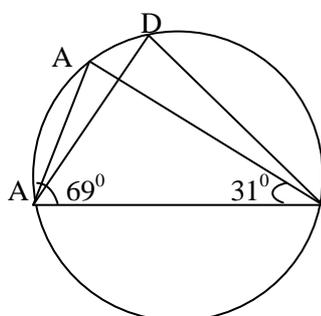
General Instruction:

- (i) All questions are compulsory.
- (ii) This question paper contains 30 questions divided into four Sections A, B, C and D.
- (iii) Section A comprises of 6 questions of 1 mark each. Section B comprises of 6 questions of 2 marks each. Section C comprises of 10 questions of 3 marks each and Section D comprises of 8 questions of 4 marks each.
- (iv) There is no overall choice. However, an internal choice has been provided in four questions of 3 marks each and three questions of 4 marks each. You have to attempt only one of the alternatives in all such questions.
- (v) Use of Calculators is not permitted

SECTION – A

Questions 1 to 6 carry 1 mark each.

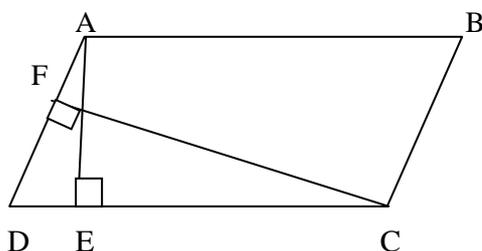
1. Simplify : Find the value of $\frac{2^0 + 7^0}{5^0}$
2. What is the equation of the line parallel to y – axis and passing through the point (3, 0)?
3. The volume of two hemispheres are in the ratio 27: 125. Find the ratio of their radii.
4. In a bag, there are 100 bulbs out of which 30 are defective ones. A bulb is taken out of the bag at random. Find the probability of the selected bulb to be a good one.
5. The perimeter of an equilateral triangle is 60 cm. Find its area. (Use $\sqrt{3} = 1.73$)
6. In the below figure, $\angle ABC = 69^\circ$, $\angle ACB = 31^\circ$, find $\angle BDC$.



SECTION – B

Questions 6 to 12 carry 2 marks each.

7. Using suitable identity, evaluate $(-32)^3 + (18)^3 + (14)^3$
8. The angles of quadrilateral are in the ratio 3: 5: 9: 13. Find all the angles of the quadrilateral.
9. In the below figure, ABCD is a parallelogram, $AE \perp DC$ and $CF \perp AD$. If $AB = 16$ cm, $AE = 8$ cm and $CF = 10$ cm, find AD.



10. An isosceles triangle has perimeter 30 cm and each of the equal sides is 12 cm. Find the area of the triangle.
11. Find the canvas required to make a covered cubicle of edge 8 m, in a park.
12. The following observations have been arranged in ascending order. If the median of the data is 63, find the value of x.

29, 32, 48, 50, x, x + 2, 72, 78, 84, 95

SECTION – C

Questions 13 to 22 carry 3 marks each.

13. Find the value of a and b, if $\frac{7+\sqrt{5}}{7-\sqrt{5}} - \frac{7-\sqrt{5}}{7+\sqrt{5}} = a + \frac{7}{11}\sqrt{5}b$

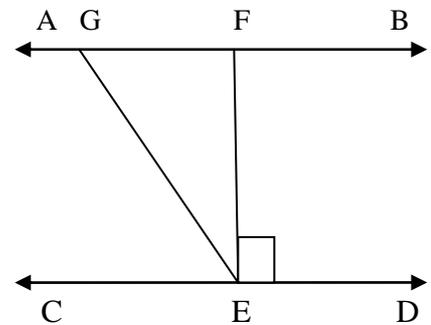
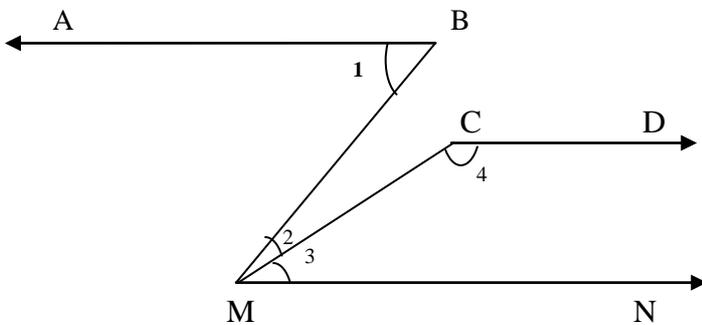
OR

Write the value of $\left(\frac{x^a}{x^b}\right)^{a+b} \times \left(\frac{x^b}{x^c}\right)^{b+c} \times \left(\frac{x^c}{x^a}\right)^{c+a}$

14. Divide $(3y^4 - 8y^3 - 5y - 5)$ by $(y - 3)$ and find the quotient and the remainder.
15. Plot the points A (0, 4), B (-3, 0), C (0, -4), D (3, 0). Name the figure obtained by joining the points A, B, C and D.
16. If a point C lies between two points A and B such that $AC = BC$, then prove that $AC = \frac{1}{2} AB$.

Explain by drawing the figure.

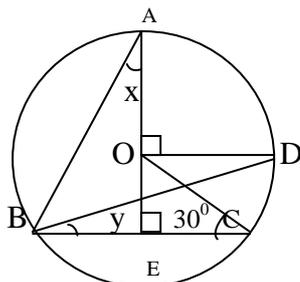
17. In the below left figure, $\angle 1 = 55^\circ$, $\angle 2 = 20^\circ$, $\angle 3 = 35^\circ$ and $\angle 4 = 145^\circ$. Prove $AB \parallel CD$



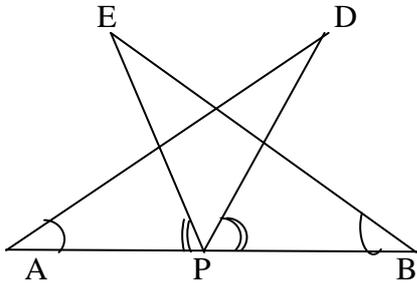
OR

In the above right sided figure, if $AB \parallel CD$, $EF \perp CD$ and $\angle GED = 126^\circ$, find $\angle AGE$, $\angle GEF$ and $\angle FGE$

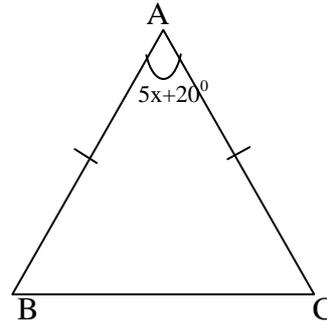
18. In the figure, O is the centre of the circle. $\angle BCO = 30^\circ$. Find the value of x and y



19. AB is a line segment and P is its mid-point. D and E are points on the same side of AB such that $\angle BAD = \angle ABE$ and $\angle EPA = \angle DPB$ (see the below figure). Show that (i) $\triangle DAP \cong \triangle EBP$ (ii) $AD = BE$

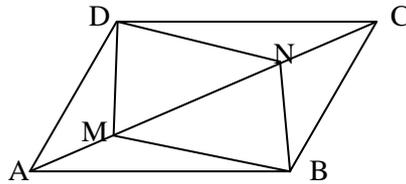


OR



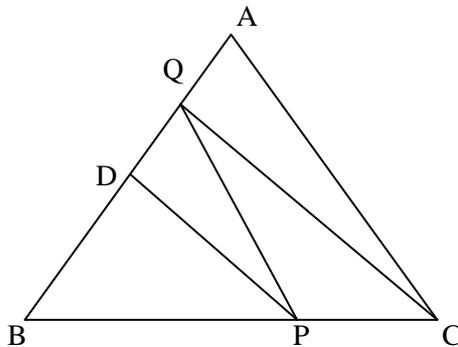
In $\triangle ABC$, $AB = AC$, $\angle A = 5x + 20^\circ$ and $\angle B = \frac{2}{5}$ th of $\angle A$. Find the measure of $\angle A$

20. In the parallelogram ABCD of the given figure, M and N are points taken on diagonal AC such that $AM = CN$. Show that $BM = DN$ and $DM = BN$.



OR

In $\triangle ABC$, D is the mid-point of AB and P is any point on BC. If $CQ \parallel PD$ meets AB in Q in the given figure, then prove that $\text{ar}(\triangle BPQ) = \frac{1}{2} \{\text{ar} \triangle ABC\}$



21. The sides of a triangle are in the ratio 13: 14:15 and its perimeter is 84 cm. Find the area of the triangle
22. 1500 families with 2 children selected randomly, and the following data were recorded:

Number of girls in a family	0	1	2
Number of families	475	814	211

Compute the probability of a family, chosen at random, having

- i) 2 girls (ii) 1 girl (iii) No girl.

SECTION – D

Questions 23 to 30 carry 4 marks each.

23. Manu went to his mathematics teacher and asked him “Sir, I want some chocolates to distribute among my classmates for my birthday but I have no money. Can you provide me some chocolates?”. Teacher told Manu, I am giving you two numbers $\frac{1}{3+2\sqrt{2}}$ and $\frac{1}{3-2\sqrt{2}}$ and if you can find the value of sum of their square, then I will provide you as many chocolates as the resulting value of sum of squares of given numbers. Find the number of chocolates. What value is depicted from this action?

24. If $x^3 + ax^2 + bx + 6$ has $(x - 2)$ as a factor and leaves a remainder 3 when divided by $(x - 3)$, the values of a and b.

OR

Without actual division, prove that $2x^4 - 6x^3 + 3x^2 + 3x - 2$ is exactly divisible by $x^2 - 3x + 2$.

25. 4 years before, age of a mother was 3 times the age of her daughter. Write a linear equation to represent this situation and draw its graph.

26. Plot the following points on a graph sheet and join them in order A(-5, 3), B (-3, -2), C (4, -2) and D (2, 3). Name the figure so formed and also mention the quadrant in which points lie.

27. EFGH is a rectangle. A, B, C and D are mid-points of the sides EF, FG, GH and EH respectively. Show that ABCD is a rhombus.

OR

Prove that “Parallelograms on the same base and between the same parallels are equal in area”.

28. Construct a triangle ABC, in which $B = 60^\circ$, $C = 45^\circ$ and $AB + BC + CA = 11$ cm.

29. A hemispherical bowl of internal radius 18 cm contains a liquid. This liquid is to be filled in cylindrical bottles of diameter 6 cm and height 6 cm. How many bottles are required to empty the bowl.

OR

A wall 6 m long, 5 m high and 0.5 m thick is to be constructed with bricks, each having length 25 cm, breadth 12.5 cm and height 7.5 cm. Find the number of bricks required to construct the wall, if it is given that cement and sand mixture occupy $\frac{1}{5}$ th of the volume of the wall

30. Draw the histogram and frequency polygon for the following:

Class interval	55-60	60-65	65-70	70-75	75-80	80-85	85-90
Frequency	5	10	15	8	20	12	5

ATOMIC ENERGY EDUCATION SOCIETY
Annual Examination (2017-18)

Class IX
Sub: Science

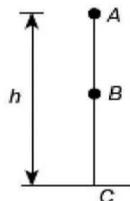
Marks: 80
Time: 3 Hrs

General Instructions:

1. All questions are compulsory.
2. The question paper comprises of two Sections, A and B. You are to attempt both the sections
3. All questions of Section-A and Section-B are to be attempted separately.
4. There is an internal choice in three questions of three marks each and two question of five marks.
5. Question number 1 to 2 in Section-A are one mark question. These are to be answered in one word or in one sentence
6. Question numbers 3 to 5 in Section-A are two marks questions. These are to be answered in about 30 words each.
7. Question numbers 6 to 15 in Section-A are three marks questions. These are to be answered in about 50 words each.
8. Question numbers 16 to 21 in Section-A are five marks questions. These are to be answered in about 70 words each.
9. Question numbers 22 to 27 in Section-B are questions based on practical skills and are two marks questions.

Section-A

1. Differentiate between milch and draught animals.
2. Which symbiotic life forms can grow on stones and help in the formation of the soil?
3. (a) Which wave property determines (i) Loudness (ii) Pitch?
(b) How are wavelength and frequency related to speed of sound waves?
4. The successive crest and trough of a wave 30 cm apart. Find the wavelength. Also find the frequency of wave if 10 crests and 10 troughs are produced in 2s.
5. Differentiate between kharif and rabi crops. Mention the months in which these are sown. Give one example of each.
6. State Law of Conservation of Energy and express it in the form of an equation for a body of mass m falling from a point A at height h above the ground at (a) A (b) B at a height from ground (c) C.



OR

Define power. State commercial unit and SI unit of electrical energy. An electric heater of 400 W works for 2 hours. Find the electrical energy units consumed in a day.

7. (a) Define matter and write its three states.
(b) Explain how these states of matter arise due to variation in the characteristics of the particles.

OR

- (a) Why does the water kept in an earthen pot become cool in summer?
(b) Draw a well labelled diagram showing sublimation of camphor.
(c) Convert: 340 K to degree Celsius.
8. Draw labelled diagram of the apparatus used to separate a mixture of two immiscible liquids.
9. Define mass number and atomic number. How are these represented around the symbol of an element? The mass number and atomic number of an isotope of uranium (U) are 235 and 92 respectively. Calculate the number of protons and neutrons in the nucleus of the atom.
10. What is xylem? Name the four elements of xylem and write one function of each.
11. List in the tabular form any three differences between the Aves and the Mammalia group.

OR

List some adaptations of reptiles towards terrestrial mode of life.

12. (a) Define average speed.
(b) A bus travels a distance of 120 km with a speed of 40 km/h and returns with a speed of 30 km/h. Calculate the average speed for the entire journey.
13. Car A of mass 1500 kg travelling at 25 m/s collides with another car B of mass 1000 kg travelling at 15 m/s in the same direction. After collision, the velocity of car A becomes 20 m/s. Calculate the velocity of car B after collision.
14. List any THREE human activities which would lead to an increase in the Carbon-di-Oxide content of air.
15. What is Nitrogen fixation? Mention the difference between nitrification and denitrification processes. Name the organisms involved in these processes.
16. Calculate the number of molecules of Sulphur (S_8) present in 16gms of solid Sulphur.
17. (a) Explain why did Rutherford select a gold foil in his alpha scattering experiments?
(b) What observations in a scattering experiment led Rutherford to make the following

conclusions?

- (i) Most of the space in an atom is empty.
- ii) Nucleus is positively charged.

(c) Mention any one drawback of Rutherford's model.

OR

Convert the following into Mole.

- (a) 12 g of Oxygen gas
- (b) 20 g of water

(c) On the basis of Thomson's model of an atom, explain how the atom is neutral as a whole.

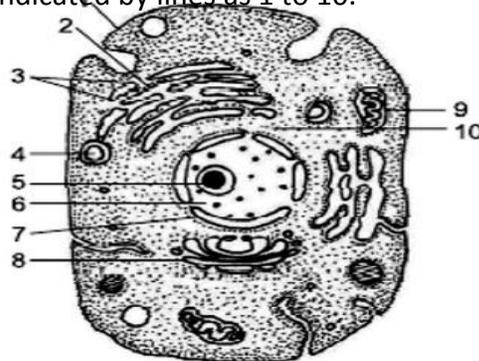
18. (a) Differentiate between acceleration due to gravity and universal gravitational constant.

(b) Derive

- i) relation between 'g' and 'G'.
- ii) State universal law of Gravitation.

19. Given below is a diagrammatic sketch of electron microscopic view of an animal cell.

Label the parts indicated by lines as 1 to 10.



A type of animal cell

20. Differentiate between Striated, unstriated and cardiac muscles diagrammatically and state their site/ Location in the body

OR

Draw a neat labelled diagram for location of different meristematic tissue in plant body.

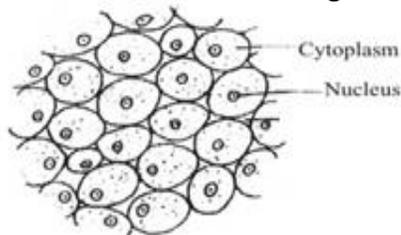
Also write their functions.

21. (a) Calculate the work done in pushing a cart through a distance of 50 m against the force of friction equal to 250 N. Also state the type of work done.

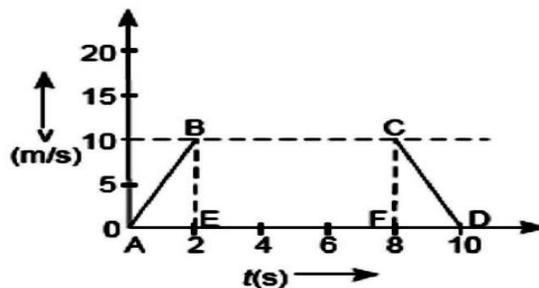
(b) Sarita lives on 3rd floor of building at the height of 15 m. She carries her school bag weighing 5.2 kg from the ground floor to her house. Find the amount of work done by her and identify the force against which she has done work. (Take $g = 10 \text{ ms}^{-2}$)

SECTION – B

22. In an experiment to determine the melting point of ice in laboratory, what form of ice should be preferably used? When should the reading of thermometer be noted?
23. Although Archana has been suffering from cold and cough she decided to appear for her Class test. Classmates seated close to her had an exposure to the infection being carried by Archana. However, only one of them actually suffered from cold and cough. Explain, what prevented rest of those classmates catching cold and cough in spite of their exposure to the infection.
24. You are given two aqueous solutions- a starch solution and a sugar solution. Which one will show Tyndall effect.? Why?
25. Name the type of plant tissue shown in the figure below. Write it's any two characteristics.



26. Find the displacement of a body whose velocity time graph is shown below:

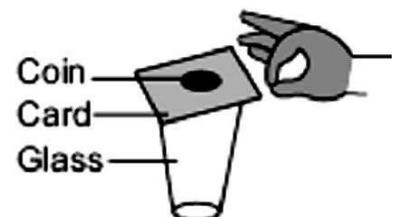


OR

Even when a body covers equal distances in equal time intervals, its velocity can be variable. Comment giving an example.

27. In the below experimental set-up, a student gives the card a sharp and fast horizontal flick with a finger.

- (i) What will happen to the coin?
- (ii) State reason for answer.



ATOMIC ENERGY EDUCATION SOCIETY

Annual Examination 2017-18

Subject : SOCIAL SCIENCE

Time : 3 hours

CLASS : IX

Max.Marks : 80

General Instructions:

- 1) There are 27 questions in all. All questions are compulsory.
- 2) Marks for each question are indicated against the question.
- 3) Questions from serial number 1 to 7 are Very Short Questions of 1 mark each. Answer to these questions should not exceed 30 words limit.
- 4) Questions from serial number 8 to 18 are Short Questions of 3 marks each. Answers to these questions should not exceed 80 words each.
- 5) Questions from serial number 19 to 25 are Long Questions of 5 marks each. Answers to these questions should not exceed 120 words each.
- 6) Question number 26 to 27 is map questions. Question number 26 is 2 mark, 27 is 3 marks.
- 7) Attach the filled-up map inside your answer book.

1. Which estate of French Society paid all taxes? 1
 2. What was the name given to the German Parliament? 1
 3. Define Birth rate. 1
 4. Name the group of islands lying in the Arabian Sea. 1
 5. Which country has the largest written constitution in the world? 1
 6. Which river drainage pattern is formed by the river Ganga 1
 7. Name the sector which supports the Primary and Secondary Sectors. 1
 8. Describe the divisions in French society before the French Revolution. 3
- Or
- Why was Nazi propaganda effective in creating a hatred for the Jews?
9. Explain the condition of workers in Russia before 1917. 3
- Or
- What do you know about Stalin's Collectivization Programme?
10. What were the similarities between colonial management of the forests in Bastar and Java? 3
 11. Write any three differences between the Eastern Ghats and Western Ghats. 3
 12. Why are rivers important for the country's economy? 3
 13. How children were trained under Nazism? 3
 14. What are the causes for overpopulation? 3
 15. "Democracy is considered the best form of government and is clearly better than any other alternative". Write three relevant points to support this statement. 3
 16. What is the significance of the "Preamble" to the Indian Constitution? 3

Or

What are the six freedoms guaranteed by the Right to Freedom?

- 17. What is a Universal Adult Franchise? Why has it been adopted in India? 3
- 18. Explain the differences between economic and non-economic activities. 3
- 19. Explain National Rural Employment Guarantee Act (NREGA). 5
- 20. Explain the causes of Russian Revolution 1917? 5

Or

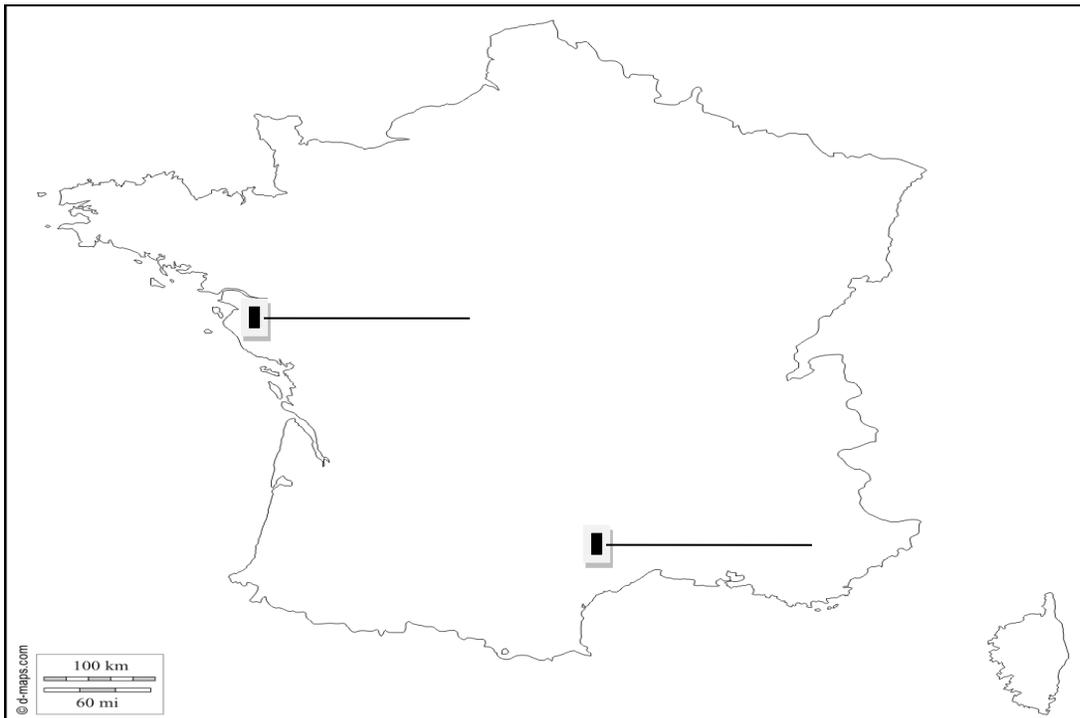
What laws were introduced by the revolutionary government in France to improve the status of women?

- 21. Describe the importance of Himalayas. 5
- 22. Why do we need a Constitution? Describe the main features of Indian Constitution. 5
- 23. Describe the global poverty scenario. 5

Or

What is Green Revolution? Write any three negative effects of Green Revolution on environment.

- 24. Write a short note on each Fundamental Right mentioned in the Indian Constitution. 5
- 25. Distinguish between Tropical Evergreen Forests and Tropical Deciduous Forests 5
- 26. On the given map of France, label the highlighted Port of France enriched due to slave trade and important political center. 2



27. On the given map of India, locate the following

3

- a) Kaziranga National Park
- b) Thar desert
- c) Wular lake

