# Summative Assessment-1 (2019-20)

#### **ENGLISH CORE CLASS-XII**

Time allowed: 3hours

Maximum marks:

80



## SECTION A - READING (30 Marks)

Read the following passage carefully.

(12 Marks)

- 1. Many of us believe that "small" means "insignificant". We believe that small actions and choices do not have much impact on our lives. We think that it is only the big things, the big actions and the big decisions that really count. But when you look at the lives of all great people, you will see that they built their character through small decisions, small choices and small actions that they performed every day. They transformed their lives through a step-by-step or day-by-day approach. They nurtured and nourished their good habits and chipped away at their bad habits, one step at a time. It was their small day-to-day decisions that added up to make tremendous difference in the long run. Indeed, in matters of personal growth and character building, there is no such thing as an overnight success.
- 2. Growth always occurs through a sequential series of stages. There is an organic process to growth. When we look at children growing up, we can see this process at work: the child first learns to crawl, then to stand and walk, and finally to run. The same is true in the natural world. The soil must first be tilled, and then the seed must be sowed. Next, it must be nurtured with enough water and sunlight, and only then will it grow, bear fruit and finally ripen and be ready to eat.
- 3. Gandhi understood this organic process and used this universal law of nature to his benefit. Gandhi grew in small ways, in his day-to-day affairs. He did not wake up one day and find himself to be the "Mahatma". In fact, there was nothing much in his early life that showed signs of greatness. But from his midtwenties onwards, he deliberately and consistently attempted to change himself, reform himself and grow in some small way every day. Day by day, hour by

hour, he risked failure, experimented and learnt from mistakes. In small and large situations alike, he took up rather than avoid responsibility.

- 4. People have always marvelled at the effortless way in which Gandhi could accomplish the most difficult tasks. He displayed great deal of self-mastery and discipline that was amazing. These things did not come easily to him. Years of practice and disciplined training went into making his successes possible. Very few saw his struggles, fears, doubts and anxieties, or his inner efforts to overcome them. They saw the victory, but not the struggle.
- 5. This is a common factor in the lives of all great people: they exercised their freedoms and choices in small ways that made great impact on their lives and their environment. Each of their small decisions and actions, added up to have a profound impact in the long run. By understanding this principle, we can move forward, with confidence, in the direction of our dreams. Often when our "ideal goal" looks too far from us, we become easily discouraged, disheartened and pessimistic. However, when we choose to grow in small ways, taking small steps one at a time, performing it becomes easy.
- (I) On the basis of your understanding of the passage, answer the following questions by choosing the most appropriate option.  $(1\times4=4 \text{ Marks})$
- 1. The main idea in the first paragraph is that
- a. Big things, big actions and big decisions make a person great
- b. Small actions and decisions are important in one's life
- c. Overnight success is possible for all of us
- d. Personal changes are not important
- 2. What does the writer mean by saying 'chipped away at their bad habits'?
- a. Steadily gave up bad habits
- b. Slowly produced bad habits
- c. Gradually criticized bad habits
- d. Did not like bad habits
- 3. Which of the following statements is true in the context of the third paragraph?
- a. Gandhi became great overnight
- b. Gandhi showed signs of greatness in childhood itself
- c. Every day Gandhi made efforts to change himself in some small way
- d. Gandhi never made mistakes

- 4. What is done by great people to transform their lives?
- a. They approach life on a day-by-day basis
- b. They build character in small ways
- c. They believe in performing everyday
- d. All of these

## (II) Answer the following questions as briefly as possible.

 $(1 \times 6 = 6 \text{ Marks})$ 

- 5. How do small actions and choices impact our lives?
- 6. Describe organic process of growth through an example from the text.
- 7. What according to the author is the 'universal law of nature'?
- 8. How did Gandhi accomplish the most difficult tasks effortlessly?
- 9. Which things about Gandhi's life were not seen by most people?
- 10. How can we achieve our 'ideal goals'?

# (III) Pick out words from the passage which are similar in meaning to the following: (2 Marks)

- a. intentionally / purposely (Paragraph 3)
- b. of deep significance; far-reaching (Paragraph 5)

#### Q2. Read the following passage carefully.

(10 Marks)

- 1. South India is known for its music and for its arts and rich literature. Madras or Chennai can be called the cultural capital and the soul of Mother India. The city is built low in pleasant contrast to the ghoulish tall structures of Mumbai and Kolkata. It has vast open spaces and ample greenery. The majestic spacious Mount Road looks like a river, wide and deep. A stroll on the Marina beach in the evening with the sea glistening in your face is refreshing. The breeze soothes the body, it refreshes the mind, sharpens the tongue and brightens the intellect.
- 2. One can never feel dull in Chennai. The intellectual and cultural life of the city is something of a marvel. Every street corner of Chennai has a literary forum, a debating society and music, dance and dramatic club. The intelligent arguments, the sparkling wit and dashing irony enliven both the political and the literary meetings. There is a young men's association which attracts brilliant speakers and equally brilliant listeners to its meetings. It is a treat to watch the speakers use their oratorical weapons. Chennai speakers are by and large sweet and urbane, though the cantankerous, fire-eating variety is quite often witnessed in

- 3. Music concerts and dance performances draw packed houses. There is hardly any cultural family in Chennai that does not learn and patronize music and dance in its pristine purity. Rukmani Devi Arundale's 'Kalakshetra' is a renowned international centre. It has turned out hundreds of celebrated maestros and dancers who have brought name and glory to our country. Karnataka music has a peculiar charm of its own. It has the moon's soft beauty and moon's soft pace. Thousands of people flock to the temple 'maidans' to get drunk with the mellifluous melodies of their favorite singers. They sit out all night in the grueling heat, swaying to the rhythm of 'nadaswaram' and rollicking with the measured beats of 'mridangam'. M.S Subbulakshmi is considered to be the nightingale of the South.
- 4. The Gods might descend from heaven to see a South Indian damsel dancing. There are several varieties of South Indian dance Bharat Natyam, Mohini Attam, Odissi, Kathakali etc. age cannot wither nor custom stale its beautiful variety. Bharat Natyam is the most graceful and enchanting dance form whereas Kathakali is most masculine and virile. South Indian dances combine voluptuousness with purity. Here every muscle and fibre of the body vibrates into life, and as the tempo increases, a divine flame-like passion bodies forth as if making an assault on heaven.
- South Indian dress, particularly of the males, is puritanically simple. There you
  cannot distinguish a judge from an 'ardali' by their dress. South Indian ladies too
  look charming and graceful in their colourful Kanjeevaram and Mysore silk
  saris.
- 6. South Indian cuisine, especially 'dosa', 'idli' and 'vada' are so delicious that now we can enjoy them almost everywhere in India as well as in some foreign countries. The Madras 'idli', which was a favourite of Gandhiji is served with 'sambhar' and coconut 'chutney'.
- (1) On the basis of your understanding of the passage, answer the following questions by choosing the most appropriate option. (2 Marks)

# 1. South India is known mainly for its

- (a) tasty food
- (b) traditional music, art, literature
- (c) scenic beauty
- (d) delicate and precise ways

- 2. South Indian dances are special because
  - (a) Gods come from heaven to see them
  - (b) there aren't many varieties of dance
  - (c) they are pure as well as sensuous
  - (d) they make an assault on heaven

### (II) Answer the following questions as briefly as possible.

 $(1 \times 6 = 6 \text{ Marks})$ 

- 3. How does the breeze on Marina Beach affect the author?
- 4. How do we know that music is very important for the people of South India?
- 5. What is the common connection between language, music and dance of South India?
- 6. What makes Karnataka music charming?
- 7. Enumerate the features of Bharat Natyam and Kathakali form of dance.
- 8. What is Kalakshetra renowned for?
- (III) Find words from the passage which are similar in meaning to the following.

(2 Marks)

- (a) ill-tempered and quarrelsome (Paragraph 2)
- (b) smooth and sweet (Paragraph 3)

# Q3. Read the following passage carefully.

(8 Marks)

Whether work should be placed among the causes of happiness or among the causes of unhappiness may perhaps be regarded as a doubtful question. There is certainly much work which is exceedingly irksome, and an excess of work is always very painful. However, work is not, to most people, more painful than idleness. There are, in work, all grades; from more relief of tedium up to the profoundest delights, according to the nature of the work and the abilities of the worker. Most of the work that most people have to do is not interesting in itself, but even that work has certain great advantages. To begin with, it fills a good many hours of the day without the need of deciding what one shall do. Most people, when they are left free to fill their own time according to their own choice, are at a loss to think of anything sufficiently pleasant to be worth doing. And whatever they decide on, they are troubled by the feeling that something else would have been more pleasant here. To be able to fill leisure intelligently is the last product of civilization and at present very few people have reached this level. Moreover the exercise of choice is tiresome in itself. Except,

to people with unusual initiative, it is positively agreeable to be told what to do at each hour of the day, provided the orders are not too unpleasant. Most of the idle rich suffer unspeakable boredom. At times they may find relief by hunting big game in Africa or by flying around the world, but the number of such sensations is limited, especially after youth is past. Accordingly, the more intelligent rich men work nearly as hard as if they were poor.

Work, therefore is desirable, first and foremost as a preventive of boredom, although uninteresting work is as boring as having nothing to do. With this advantage of work, another associated advantage is that it makes holidays much more delicious when they come. Provided that a man does not have to work so hard as to impair his vigour, he is likely to find far more zest than an idle man would possibly find.

The second advantage of most paid work and some of unpaid work is that it gives chances of success and opportunities for ambition. In most work, success is measured by income and while our capitalistic society continues, this is inevitable. However dull work too, becomes bearable, if it is a means of building up a reputation. Continuity of purpose is one of the most essential ingredients of happiness and that comes chiefly through work.

- A. On the basis of your reading of the above passage make notes on it, using headings and sub headings. Use recognizable abbreviations (wherever necessary minimum 4) and a format you consider suitable. Also supply an appropriate title to it. (5 Marks)
- B. Write a summary of the passage in about 80 words. (3 Marks)

  SECTION B ADVANCE WRITING SKILLS (30 Marks)
- Q4. Your school is organizing a Public Awareness Exhibition. In connection with it, prepare a poster to bring home the importance of conservation of electricity. Your school is A.K. Public School, Green Park, Delhi. (4 Marks)

  Namita/ Namit has come out successful in the XII class examination. She/he has decided to have a party for her/his friends. Draft an invitation in about 50 words giving details of venue, time and date.
- Q5. You are Amit/Amita staying at Sunrise Apartments, Gymkhana Road, Pune. The main road leading to this colony has three open manholes causing frequent accidents at night. The streetlight is also not available. Write a letter to the Editor of "The Times of India" expressing your concern about the apathy of the authorities towards this situation. Also suggest ways to mobilize city dwellers, with the help of school children, for the cause for safe roads.

  4 (Marks)

You are Shreya/Shreyas. Write an application in response to the following advertisement in a national daily. You consider yourself suitable and eligible for this post.

Applications are invited for the post of a Nursery teacher/PRT in Y.K. International School, Ghaziabad, UP. The candidate must have a minimum experience of 3 years of teaching at the primary and pre-primary level. The applicant must have a pleasant and energetic personality. She/he should be creative and adaptable. Attractive salary. Interested candidates should apply to the Principal with a detailed resume.

Q6. You are an active member of the Animals Lovers Club of your school which works for preventing cruelty to animals. Write an article in 150 -200 words for your school magazine emphasising the need to co-exist peacefully with animals. You are Zaheeda/Zahir of P. K. Senior Secondary School, Hyderabad.

Or

Over the past few years there has been a constant rise in coaching institutes and private tuition centers all over India. Write an article in about 150-200 words highlighting the exploitation of young minds that seek sincere counselling and proper direction. You are Gurpreet, a student of class XII of Indira Public School, Jamshedpur.

Q7. You are Suraj/Sandhya of Gargi Senior Secondary School Delhi. Games and Sports should be made compulsory in schools. Write a speech for morning assembly on the Importance of Games and Sports in Personality Development in about 150 -200 words.

Or

You have been asked to participate in a debate competition on the topic

"Community service once a week should be introduced in all schools and should be graded".

Write the speech in about 200 words either for or against the motion.

SECTION - C (TEXT BOOKS {FLAMINGO AND VISTAS}
and LONG READING TEXT {NOVEL}) (40 Marks)

			1
	Q8. Read the lines given below and answer the questions that follow	. (4 Marks)	X
	I looked again at her, wan pale	o d	
	as a late winter's moon and felt that old	7	
	familiar ache, my childhood's fear,		
	but all I said was, see you soon, Amma		
	and all I did was smile and smile and smile		
7	a) Who looked pale and wan and why?	(1 Mark)	
	b) What was the speaker's familiar ache?	(1 Mark)	
	c) Explain "as a late winter's moon".	(1 Mark)	
	d) Name the poem and the poet.	(1 Mark)	
	Or		
	Surely, Shakespeare is wicked, the map a bad example,		
	With ships and sun and love tempting them to steal -		
	For lives that slyly turn in their cramped holes		
	From fog to endless night.	t see oo ah	
	a) Why is Shakespeare wicked?	(1 Mark)	
	b) Why is the map a bad example?	(1 Mark)	4
	c) What is the condition of these children as described in these lines?	(1 Mark)	
	d) Explain "From fog to endless night".	(1 Mark)	
Ø	Q9. Answer the following questions in about 30-40 wor	ds each:	é
	F 4 3 1	=12 Marks)	49
	a) How does M. Hamel prove to be an ideal teacher?		
in	b) Why did Edla still entertain the peddler even after she knew the truth	about him?	
	c) Mention the hazards of working in a bangle factory.		
	d) Why does Dr. Sadao mutter the words "My friend" while treating the prisoner of war? What is ironical about his words?	ne American	
	Q.10. Answer the following in about 120 – 150 words	marks) 6	(2=10
٨	Though Rajkumar Shukla was an illiterate peasant; he was resolute and	•	10-
A	bring a change in the lives of the people of Champaran. Taking hints fr		
ß.	write an article on the topic, "Grit and Determination can take you a long of		ligea -

CLASS-XII

# SUMMATIVE ASSESSMENT -I (2019-20) SUBJECT- HINDI TIME: - 3 Hours

MM: 80

- इस प्रश्न पत्र में चार खंड है, क.ख.ग ।
- तीन खंडों के प्रश्नों के उत्तर देना अनिवार्य है I
- यथासंभव तीनो खंडों के प्रश्नों के उत्तर क्रमशः लिखिए ।

	खंड क	
1.47	. निम्निलिखित गर्यांश का पढ़कर पूछे गए प्रश्नों के उत्तर लिखिए	12
	गंगा दशहरा जय आता है, तो मेरे भीतर कोई सुर बजने लगता है। गंगोत्री पर	
	उनींदी नींद का साया था। और वह सुर मुझे बाहर की ओर खींच रहा था। मैं	
	अचानक उठकर कमरे से बाहर आ गया और ईशावस्त्र आश्रम से गंगा को	
	अपने पूरे वेग से बहते देखता रहा। उजेरिया रात थी। बर्फ में नहाई भगीरथी	
	चोटियाँ और गंगा का स्वर। उस सत में सिर्फ गंगा का स्वर ही सुनाई दे रहा	
	था। वह स्वर था या कोई सुर। मैं उस सुर में खो सा गया।	
	गंगोत्री से नीचे आ कर वैसा सुर रह भी नहीं जाता। गंगा अपने हर पड़ाव पर	
	एक अलग सुर में नजर आती है। सोचता हूँ कि गंगा ने धरती पैर आने के	
	लिए आखिर क्या समय चुना था रे जेठ की तपती दोपहरी में वह आई थी।	
	साल के जिस पड़ाव पर पानी की सबसे ज्यादा जरूरत महसूस होती है, उसी	. 3
	समय आई थी माँ गंगा। दशमी के दिन ही माँ गंगा धरती पर आई थी।	
	दरअसल, भगीरथ ने स्वर्ग में बसी गंगा को धरती पर आने के लिए मना तो	
	लिया था, लेकिन उस समय वह लरजती, गरजती अल्हड़ नदी थी। उन्हें माँ	
*	बनाकर भेजा था महादेव ने।	
	वह अपने स्वर्ग को छोड़कर धरती पर चली आई थीं। स्वर्ग के लिए तो शायद	
	उनका अल्हड़पन ठीक होगा, लेकिन धरती के लिए वह ठीक नहीं था। धरती	
	के लिए तो माँ गंगा की ही जरूरत थी। वह गंगा जो हम तपते हुए लोगों को	
	तुस कर सके। अपने प्रवाह में हमारे सारे पापों को बहाकर ले जाए। हरिद्वार की	

	गंगा का सुर गंगोत्री के सुर से कितना अलग है ?कितनी मैली नजर आती है गंगा। कैसे डुबकी लगाऊँ। उसकी वजह क्या हम ही तो नहीं है। मैं उस प्रवाह में आचमन सा करता हूँ। मन ही मन सोचता हूं- हे गंगा मैया, आपकी तरह हमारे जीवन का प्रवाह भी बहता रहे।	
(क)	गयांश को पढ़कर उचित शीर्षक तिखिए।	1
(ख)	ईशावस्त्र आश्रम से लेखक ने क्या देखा?	1
(ग)	किसे देखकर लेखक के भीतर सुर बजने लगता है और क्यों?	2
(ঘ)	गंगा के स्वर को लेखक सुर क्यों कहता है?	2
(량)	जेठ की तपती दोपहरी में गंगा के धरती पर आने के कारणों को स्पष्ट कीजिए	2
(ঘ)	धरती के लिए गंगा का अल्हड़पन ठीक क्यों नहीं हो सकता था ?	2
(ড)	हरिद्वार की गंगा गंगोत्री की गंगा से कैसे अलग है?	2

I looke as a late familiar but all l and all a) Who lo b) What w c) Explain d) Name th Surely, Shake With ships ar For lives that From fog to e a) Why is	he lines given below and answer the questions d again at her, wan pale e winter's moon and felt that old rache, my childhood's fear, said was, see you soon, Amma I did was smile and smile and smile oked pale and wan and why? as the speaker's familiar ache? "as a late winter's moon".	i i	(1 Mark)
as a late familiar but all land all and all and all a) Who loo b) What we c) Explain d) Name the Surely, Shake With ships are For lives that From fog to eas a) Why is	e winter's moon and felt that old r ache, my childhood's fear, said was, see you soon, Amma I did was smile and smile and smile oked pale and wan and why? as the speaker's familiar ache? "as a late winter's moon". he poem and the poet.	£.	(8)
familiand but all land all and all all and all all and all and all all all all all all all all all al	r ache, my childhood's fear, said was, see you soon, Amma I did was smile and smile and smile oked pale and wan and why? as the speaker's familiar ache? "as a late winter's moon". he poem and the poet.		(8)
but all land all and all a) Who loo b) What we c) Explain d) Name the Surely, Shake With ships are For lives that From fog to ea.	I said was, see you soon, Amma I did was smile and smile and smile oked pale and wan and why? as the speaker's familiar ache? "as a late winter's moon". he poem and the poet.		(8)
and all a) Who lo b) What w c) Explain d) Name th  Surely, Shake With ships ar For lives that From fog to e a) Why is	I did was smile and smile and smile oked pale and wan and why? as the speaker's familiar ache? "as a late winter's moon". he poem and the poet.		(8)
b) What w c) Explain d) Name th Surely, Shake With ships ar For lives that From fog to e a) Why is	as the speaker's familiar ache? "as a late winter's moon". he poem and the poet.		(8)
c) Explain d) Name th Surely, Shake With ships ar For lives that From fog to e	"as a late winter's moon". ne poem and the poet.		(8)
d) Name the Surely, Shake With ships are For lives that From fog to e	ne poem and the poet.		(1 Mark)
Surely, Shake With ships ar For lives that From fog to e			(1 Mark)
With ships ar For lives that From fog to e	200		(1 Mark)
With ships ar For lives that From fog to e	Or		•
For lives that From fog to e  a) Why is	espeare is wicked, the map a bad example,		
From fog to e	nd sun and love tempting them to steal -	70.	
a) Why is	slyly turn in their cramped holes		
	endless night.		
		1	
b) Why is	Shakespeare wicked?		(1 Mark)
100000000000000000000000000000000000000	the map a bad example?	N.	(1 Mark)
ACCUSATION AND ACCUSAGE	the condition of these children as described in the	nese lines?	(1 Mark)
d) Explain	"From fog to endless night".		(1 Mark)
Q9. Answer	the following questions in abou	ut 30-40 word	ds each:
to		(4×3=	=12 Marks)
a) How do	es M. Hamel prove to be an ideal teacher?		
b) Why die	d Edla still entertain the peddler even after she k	new the truth	about him?
c) Mention	the hazards of working in a bangle factory.		
1050	es Dr. Sadao mutter the words "My friend" who of war? What is ironical about his words?	nile treating th	ne American
Q.10. Answe	er the following in about 120 – 150 words		marks) 5x
	rumar Shukla was an illiterate peasant; he was	resolute and	was able to
bring a chan	ge in the lives of the people of Champaran. Ta	aking hints fro	om the text,
write an artic Commen King'		e you a long y	vav"

CLASS-XII

## SUMMATIVE ASSESSMENT -I (2019-20) SUBJECT- HINDI TIME: - 3 Hours

MM: 80

- इस प्रश्न पत्र में चार खंड है, क,ख,ग।
- तीन खंडों के प्रश्नों के उत्तर देना अनिवार्य है ।
- यथासंभव तीनो खंडों के प्रश्नों के उत्तर क्रमशः लिखिए ।

	1 M/ m	
i	खंड क	
1.	निम्नितिखित गद्यांश का पढ़कर पूछे गए प्रश्नों के उत्तर लिखिए	12
N DA	गंगा दशहरा जव आता है, तो मेरे भीतर कोई सुर बजने लगता है। गंगोत्री पर	
	उनींदी नींद का साया था। और वह सुर मुझे बाहर की ओर खींच रहा था। मैं	
	अचानक ठठकर कमरे से बाहर आ गया और ईशावस्त्र आश्रम से गंगा को	
	अपने पूरे वेग से बहते देखता रहा। उजेरिया रात थी। बर्फ में नहाई भगीरथी	
*	चोटियाँ और गंगा का स्वर। उस रात में सिर्फ गंगा का स्वर ही सुनाई दे रहा	
	था। वह स्वर था या कोई सुर। मैं उस सुर में खो सा गया।	
	गंगोत्री से नीचे आ कर वैसा सुर रह भी नहीं जाता। गंगा अपने हर पड़ाव पर	
	एक अलग सुर में नजर आती है। सोचता हूँ कि गंगा ने धरती पर आने के	
	लिए आखिर क्या समय चुना था / जेठ की तपती दोपहरी में वह आई थी।	
	साल के जिस पड़ाव पर पानी की सबसे ज़्यादा जरूरत महसूस होती है, उसी	. EK
	समय आई थी माँ गंगा। दशमी के दिन ही माँ गंगा धरती पर आई थी।	
	दरअसल, भगीरथ ने स्वर्ग में बसी गुंगा को धरती पर आने के लिए मना तो	
. Urlig	लिया था, लेकिन उस समय वह लरजती, गरजती अल्हड़ नदी थै। उन्हें माँ	
₹_,	बनाकर भेजा था महादेव ने।	
	वह अपने स्वर्ग को छोड़कर धरती पर चली आई थीं। स्वर्ग के लिए तो शायद	
	उनका अल्हड़पन ठीक होगा, लेकिन धरती के लिए वह ठीक नहीं था। धरती	
	के लिए तो माँ गंगा की ही जरूरत थी। वह गंगा जो हम तपते हुए लोगों को	
	तृप्त कर सके। अपने प्रवाह में हमारे सारे पापों को बहाकर ले जाए। हरिद्वार की	

	गंगा का सुर गंगोत्री के सुर से कितना अलग है ?िकतनी मैली नजर आती है गंगा। कैसे डुवकी लगाऊँ। उसकी वजह क्या हम ही तो नहीं है। मैं उस प्रवाह में आचमन सा करता हूँ। मन ही मन सोचता हूं- हे गंगा मैया, आपकी तरह हमारे जीवन का प्रवाह भी बहता रहे।	
(क)	गयांश को पढ़कर उचित शीर्षक लिखिए।	1
(ख)	ईशावस्त्र आश्रम से लेखक ने क्या देखा?	1
(ग)	किसे देखकर लेखक के भीतर सुर बजने लगता है और क्यों?	2
(ঘ)	गंगा के स्वर को लेखक सुर क्यो कहता है?	2
(要)	जेठ की तपती दोपहरी में गंगा के धरती पर आने के कारणों को स्पष्ट कीजिए	2
(च)	धरती के लिए गंगा का अल्हड़पन ठीक क्यों नहीं हो सकता था ?	2
(ন্ড)	हरिद्वार की गंगा गंगोत्री की गंगा से कैसे अलग है?	2

2.	निम्नलिखित काव्यांश को पढ़कर पूछे गए प्रश्नों के उत्तर लिखिए	1×4=4
	नया साल आया, चलो मुस्कुराएँ	
	जटिल जिन्दगी को सरल कुछ बनाएँ	1
	सूने हृदय में भी झनकार भर दे	
	नया गीत कोई सहज गुनगुनाएँ	
	तिमिर रोष है, हम कहीं घिर न जाएँ	
	जिसे दूर छोड़ा, वही फिर न आएँ	
	अभी तक कहीं हम बिखरे हुए हैं,	
	सवेरे का सूरज मिलकर उगाएँ।	
	जहाँ बन गई दूरियाँ , कुछ घटाएँ,	
48	अकेले खड़ा जो, उसे संग लाएँ,	
1	अभी कितनी बातों में उलझे हुए हैं,	
	नई सोच से हम नया हल सुझाएँ।	

	करें शास्त्र श्यामल धरा को धटाएँ,	
	बिखराएँ खुशबु वतन की हवाएँ,	
	बनाकर यहाँ पर भरोसे का मौसम	
	बंजर भूमि पर अब नया हल चलाएँ	
(क)	कवि के मुस्कुराने के कारणों को स्पष्ट कीजिए।	-1
(ख)	कवि को किससे घिरने का भय है?	1
(ग)	दूरियों को कम करने की बात क्यों की गई है ?	1
(ঘ)	'बनाकर यहाँ पर भरोसे का मौसम' – पंक्ति का भाव स्पष्ट कीजिए ।	1
	खंड – ख	
3.	नीचे लिखे विषयों में से किसी एक विषय पर अनुच्छेद लिखिए	5
(क)	भारतीय किसान	
(खू)	हमारे राष्ट्रीय पर्व	
(ग)	शिक्षा सबका अधिकार	
(ঘ)	उषा ने आँचल फैलाया' और 'नीचे आँचल के' – पंक्ति में प्रयुक्त दोनों आँचल के अर्थ रूप्ष्ट कीजिए।	
4.	भ्रष्टाचार में लिप्त किसी अधिकारी का कार्य आपने अपने पास प्रमाण पत्र के तौर पर रखा है। विवरण प्रस्तुत करते हुए पुलिस कमिश्नर, राष्ट्रीय राजधानी क्षेत्र , दिल्ली को पत्र लिखकर उचित कारवाई करने का आग्रह कीजिए ।	5
,	अथवा	
Z'	बाढ़ संकट में राहत कार्य में हो रहे देरी की सूचना देते हुए आपदा प्रबंधन किए। कि	

5.	निम्नलिखित प्रश्नों में से किन्हीं चार का संक्षिप उत्तर लिखिए	1 x 4 = 4
(ক)	अंशकालिक पत्रकार किसे कहते हैं?	10
(ख)	पीत पत्रकारिता किसे कहते हैं?	
(ग)	रेडियों की लोकप्रियता के दो कारणों का उल्लेख कीजिए।	
(घ)	खोज परक पत्रकारिता' से आप क्या समझते है?	
(ङ)	विशेष लेखन किसे कहते हैं?	
6.	'धर्म की आड़ में व्यास भ्रष्टाचार' विषय पर एक आलेख तैयार कीजिए ।	3
,	अथवा	
	हाल ही में पढ़ी किसी पुस्तक की समीक्षा कीजिए।	
7.	'महानगरों में आवास की समस्या' विषय पर एक फीचर तैयार कीजिए	3
70	अथवा	
T The	'स्वतंत्रता दिवस पर रंगारंग कार्यक्रम' विषय पर एक फीचर कीजिए।	
8.	निम्नितिखित काव्यांश को पढ़कर पूछे गए प्रश्नों के उत्तर लिखिए-	2x3=6
	पतंगों के साथ वे भी उड़ रहे हैं	
	अपने रंधों के सहारे	
	अगर वे कभी गिरते हैं छतों के	=
	खतरनाक किनारों से	1
	और बच जाते हैं तब तो	-
	और भी निडर होकर सुनहले सूरज के	
	सामने आते हैं पृथ्वी और भी तेज	
	घूमती हुई आती है	
W.	उनके बेचैन पैरों के पास ।	
(क)	पतंगों के सहारे उड़ने का क्या आशय है?	7
(ৰ্ড)	गिरकर वचने पर बच्चों में क्या प्रतिक्रिया होती है?	
	Carlo Carlongagan San Armany you advantage Sana-San San San San San San San San San San	V:,
(ग)	पैरों को बेचैन क्यों कहा गया है?	
. 9.	निम्नितिखित काव्यांश को पढ़कर पूछे गए प्रश्नों के उत्तर निखिए	2x2=4
	बात सीधी थी पर एक बार	
	भाषा के चक्कर में	
	जरा टेढी फंस गई	

(क)	काव्यांश का भाव-सौन्दर्य स्पष्ट कीजिए।		
(ख)	काव्यांश की भाषा संबंधी दो विशेषताओं का उल्लेख कीजिए।	1	1
1	<ol> <li>निम्निलिखित में से किन्हीं दो प्रश्नों के उत्तर लिखिए</li> </ol>	3x2=6	
(क)	किय ने खेत की तुलना कागज से क्यों की है?		
(অ)	'परदे पर वक्त की कीमत है '- कहकर कवि ने पूरे साक्षात्कार को किस रूप में व्यक्त किया है?		
(ग)	'ऊषा' कविता के किन उपमानों के आधार पर आप इस कविता को गाँव की सुबह का गतिशील चित्र कह सकते हैं?	20.	
(घ)	कविता की उड़ान और चिड़िया की उड़ान में क्या अंतर है?		
. 1	निम्नलिखित गयांश को पढ़कर पूछे गए प्रश्नों के उत्तर लिखिए	2x3=6	
	प्लेटफार्म पर उसके बहुत से दोस्त, भाई, रिश्तेदार थे, हसरत भरी नजरों, बहते हुए आँसुओं, ठंडी साँसों और भिंचे हुए होंठों को बीच में से काटती हुई रेल सरहद की तरफ बढ़ी। अटारी में पाकिस्तानी पुलिस उतरी, हिन्दुस्तानी पुलिस सवार हुई। कुछ समझ में नहीं आता था कि कहाँ से लाहौर खत्म हुआ और किस जगह से अमृतसर शुरू हो गया। एक जमीन थी, एक जबान थी,		(
	एक सी सूरतें और लिबास, एक सा लवो लहजा, और अंदाज थे, गलियाँ भी एक ही सी थी जिनसे दोनों बड़े प्यार से एक-दूसरे को नवाज रहे थे। बस मुश्किल सिर्फ इतनी थी कि भरी हुई बंदूकें दोनों के हाथों में थी।		
(क)	लाहौर और अमृतसर के बीच के अंतर का पता क्यों नहीं लगता?		
(ख)	प्लेटफॉर्म पर खड़े लोगों की दशा पर टिप्पणी कीजिए।		
(ग)	अलग-अलग देश के लोग होते हुए भी एक दूसरे को क्यों नवाज रहे थे?		
12	. निम्निलिखित प्रश्नों के उत्तर लिखिए क) 'काले मेघा पानी दे 'पाठ लोक-विश्वास और विज्ञान के द्वन्द का चित्रण है- कैसे?	3x 3 = 9 1x1=1 10	o Eli
	ख) लुट्टन सिंह पहलवान की कीर्ति दूर-दूर तक कैसे फैल गई? ग) चार्ली की फिल्में भावनाओं पर टिकी है, बुद्धि पर नहीं कैसे? घ) शिरीष को अवधूत क्यों कहा गया है?		6
13	क) यशोधर बाब किशन टा में कहाँ नक प्रथानित के उपन किश	4x1=4	
14	The state of the s	4x2=8	
	क) औरतों को बहादुर सिपाहियों से ज्यादा संघर्ष करने वाली क्यों बताया गया है 'डायरी के पन्ने' पाठ के आधार पर लिखिए ख) मुअनजोदड़ो की सभ्यता पूर्ण विकसित मानव सभ्यता थी – कैसे? ग) जूझ के कथानायक में कविता लिखने की चाह कैसे उत्पन्न हुई? घ) यशोधर बाबू चड्ढा जैसे नवयुवकों के कार्यप्रणाली और व्यवहार में से आप किसे अपनाना चाहेंगे और क्यों?		

### SUMMATIVE ASSESSMENT - I (2019-20)

CLASS- 12th (CBSE)

SUBJECT- CHEMISTRY

MM: 50

TIME: 3 Hours

Note: a). Question No. 1 to 15 each of 1 mark.

- b). Question No. 16 to 20 each of 2 marks.
- c). Question No. 21 to 27 each of 3 marks.
- d). Question No. 28 carries 4 marks.
- Q.1 Which of the following Octahedral complexes is non-conducting?

a. Cocl3. 3NH3

b. Cocl<sub>3</sub>. 6NH<sub>3</sub>

c. Cocl<sub>3</sub>. 4NH<sub>3</sub>

d. Cocl<sub>3</sub>. 5NH<sub>3</sub>

Q.2 Which of the following is not applicable (favourable) condition for physical Adsorption?

a. High Pressure

b. negative ΔH

c. Higher critical temp. of Adsorbate

d. High temp.

Q.3 The rate constant of a Reaction is  $1.2 \times 10^{-5} \ mol^{-1} lit^2 s^{-1}$ . The order of the reaction is-

a. Zero

b. 1

c. 2

d. 3

Q.4 The Units of conductivity are -

a. ohm cm<sup>-1</sup>

 $b. ohm^{-1}cm^2$ 

 $c. ohm^{-1}$ 

 $d. ohm^{-2}cm^2equiv^{-1}$ 

Q.5 Which one of the following concentration is not affected by temperature?

a. Normality

b. Molality

c. Molarity

d. formality

Q. 6 Give an example of a solid solution in which the solute is a gas.

- Q.7 Can you store copper sulphate solution in a Zinc pot?
- Q.8 Arrange the following metals in the order in which they displace each other from the solution of their salt. Al, Cu, Fe, Mg & Zn
- Q: 9 In a reaction 2A→P, the concentration of A decreases from 0.5 mol lit-1 to 0.4 mol lit-1 in 10 minutes. Calculate the rate during this interval.
- Q.10 A reaction is second order with respect to a reactant. How is the rate of reaction affected if the concentration of the reactant is (i) doubled (ii) reduced to half?
- Q. 11 Why is the ester Hydrolysis slow in the beginning and become faster after sometime.
- Q.12 State the role of silica in the metallurgy of copper.
- Q. 13 Which is stronger reducing agent Cr2+ or Fe2+ and why?
- Q.14 Write the IUPAC name of following -

- Q.15 Write the electronic configuration of the element with the atomic number 61, 91.
- Q.16 Predict the number of unpaired electrons in the square planar  $[Pt (CN)_4]^{2-}$  im.
- Q.17 What is the Lanthanoid contraction? What are the consequences of Lanthanoid contraction?
- Q.18.  $[Fe(H_2O)_6]^{3+}$  is strongly paramagnetic whereas  $[Fe(CN)_6]^{3-}$  is weakly paramagnetic. Explain.
- Q.19. The conductivity of 0.20 M solution of KCl at 298 K is 0.0248 Scm<sup>-1</sup>. Calculate its molar conductivity.
- Q.20. Amongst the following compounds, identify which are insoluble, partially soluble and highly soluble in water (i) Phenol (ii) toluene (iii) Formic acid (iv) ethylene glycol.
- Q.21 The decomposition of  $N_2O_5$  in CCl<sub>4</sub> at 318 K has been studied by monitoring the concentration of  $N_2O_5$  in the solution. Initially the concentration of  $N_2O_5$  is 2.33 mol and after 184 minutes, it is reduced to 2.08 mol. The reaction takes place according to the equation  $2 N_2O_5(g) \rightarrow 4 NO_2(g) + O_2(g)$

(1)

- a) Calculate the average rate of this reaction in term of hours, minutes and seconds.
- b) What is the rate of production of NO2 during this period?
- Q.22 Ethanol is used for drinking purpose. But to refrain people from drinking industrial alcohol, it is denatured. Now a days some countries use ethanol as an additive in gasoline since it is cleaner fuel.
  - a) What is denatured alcohol? Why it is denatured?
  - b) Would you support the use of ethanol as an additive in gasoline for India?
  - c) What are the values associated with your decision?
- Q.23 (a) Give the structure of manganite ion and permanganate ion.
  - (b) Give the schematic representation of chemical reactions of lanthanoids.
- Q.24 If a current of 0.5 A flows through a metallic wire for 2 hours then how many electrons would flow through the wire.
- Q.25 Explain Zone refining and Mond process.
- Q.26 Explain following: (i) Tyndall effect (ii) Gold Number (iii) Tanning (iv) emulsions
- Q.27 (i) Write IUPAC name of the following compound

 $K_3[Co(C_2O_4)_3]$ ,  $[Co(NH_3)_6Cl][ZnCl_4]$ 

- (ii) Explain bonding in metal carbonyl.
- Q. 28 Write the balance chemical Reaction:
- (i) Hoffman bromide reaction
- (ii) Carbyl Amine Reaction

# SUMMATIVE ASSESSMENT 2019-20

SUBJECT: Physics

MM: 50

TIME: 3 Hours

CLASS- 12TH Note: Q. no. 1 to 12 each of 1 mark. Q. no. 13 to 24 each of 2 marks. Q. no. 25 to 26 each of 5 marks. And Q. no. 27 is of 4 marks.

## SECTION-A

- 1. Express the unit of electric potential in terms of the base units of SI.
- 2. Consider three charged bodies P, Q and R. If P and Q repel each other and P attracts R, what is the nature of force between Q and R?
- 3. Write the expression for speed of electromagnetic waves in free space.

OR

Name the electromagnetic spectrum to which the following wavelengths belong:

a. 10<sup>-2</sup>m

- Ominserting a dielectric between the plates of a capacitor, its capacitance is found to increase 5 times. What is the relative permittivity of the dielectric?
- 5. What kind of ferromagnetic material is used for coating magnetic tapes in a cassette player, or for building 'memory stores' in a modern computer?

OR

What is the value of the horizontal component of the earth's magnetic field at magnetic poles?

#### Section-B

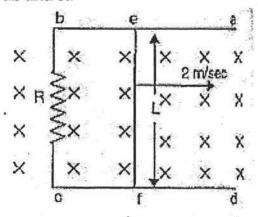
6. A  $60 \mu F$  capacitor is connected to a 110 V, 60 Hz ac supply. Détermine the rms value of the current in the circuit.

Find the capacitance of the capacitor that have a reactance of  $100\Omega$  when used with an a.c. source of free ency  $\frac{5}{\pi}kHz$ .

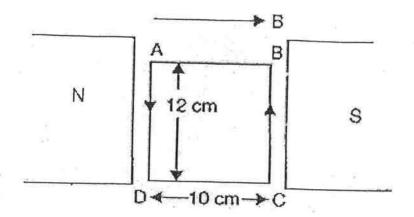
7. A negligibly small current is passed through a wire of length 15 m and uniform cross section  $6.0 \times 10^{-7} m^2$ , and its resistance is measured to be  $5.0 \Omega$ . What is the resistivity of the material at the temperature of the experiment?

Write an expression for the resistivity of a metallic conductor showing its variation over a limited range of temperatures.

- 8. The figure shows a conductor of length l=0.5 m and resistance r=0.5 ohm sliding without friction at a velocity v=2 m/s over two conducting parallel rods ab and cd lying in a horizontal plane. A resistance  $R=2.5\Omega$  connects the ends b and c. A vertical uniform magnetic field of induction B=0.6 T exists over the region. Determine:
  - i. the current in the circuit,
  - ii. the force in the direction of motion to be applied to the conductor for the latter to move with the velocity v and
  - iii. the thermal power dissipated by the circuit. Neglect the resistance of the guiding rods ab and cd



- 9. What is the cause of conduction current?
- 10. Express the following terms
  - a) Capacitance
  - b) Gauss law in terms of Magnetic field
- 11. Define the terms
  - a) Why sky appears blue.
  - b) Rainbow formation
- 12. A 50 turn coil as shown in the figure below carries of 2 A in a magnetic field B = 0.25 Wb  $m^{-2}$ . Find the torque acting on the coil. In what direction will it rotate?



Section-C

- 13. An applied voltage signal consists of a superposition of a dc voltage and an a.c. voltage of high frequency. The circuit consists of an inductor and a capacitor in series. Show that the dc signal will appear across C and the ac signal across L.
- 14. A copper wire of radius 0.1 mm and resistance  $1K\Omega$  connected across a power supply 20V. (i) How many electrons are transferred per second b/w the supply and the wire at one end. (ii) Write down the current density in the wire.
- 15. Define internal resistance of cell. On what factors does it depends?
  - 16. What is a potentiometer? Give its construction and principle.

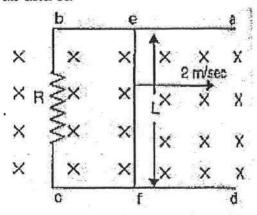
#### OR

The ground state energy of hydrogen atom is -13.6 eV . What are the kinetic and potential energies of the electron in this state?

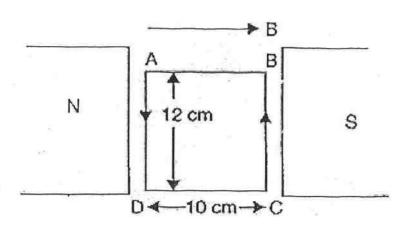
17. Explain how electron mobility changes for a good conductor when (i) the temperature of the conductor is decreased at constant potential difference and (ii) applied potential difference is double at constant temperature.

Write an expression for the resistivity of a metallic conductor showing its variation over a limited range of temperatures.

- 8. The figure shows a conductor of length l=0.5 m and resistance r=0.5 ohm sliding without friction at a velocity v=2 m/s over two conducting parallel rods ab and cd lying in a horizontal plane. A resistance  $R=2.5\Omega$  connects the ends b and c. A vertical uniform magnetic field of induction B=0.6 T exists over the region. Determine:
  - i. the current in the circuit,
  - ii. the force in the direction of motion to be applied to the conductor for the latter to move with the velocity v and
  - iii. the thermal power dissipated by the circuit. Neglect the resistance of the guiding rods ab and cd



- 9. What is the cause of conduction current?
- 10. Express the following terms
  - a) Capacitance
  - b) Gauss law in terms of Magnetic field
- 11. Define the terms-
  - a) Why sky appears blue.
  - b) Rainbow formation
- 12. A 50 turn coil as shown in the figure below carries of 2 A in a magnetic field B = 0.25 Wb  $m^{-2}$ . Find the torque acting on the coil. In what direction will it rotate?



Section-C

- 13. An applied voltage signal consists of a superposition of a dc voltage and an a.c. voltage of high frequency. The circuit consists of an inductor and a capacitor in series. Show that the dc signal will appear across C and the ac signal across L.
- 14. A copper wire of radius 0.1 mm and resistance  $TK\Omega$  connected across a power supply 20V. (i) How many electrons are transferred per second b/w the supply and the wire at one end. (ii) Write down the current density in the wire.
- 15. Define internal resistance of cell. On what factors does it depends?
- 16. What is a potentiometer? Give its construction and principle.

OR

The ground state energy of hydrogen atom is -13.6 eV . What are the kinetic and potential energies of the electron in this state?

17. Explain how electron mobility changes for a good conductor when (i) the temperature of the conductor is decreased at constant potential difference and (ii) applied potential difference is double at constant temperature.

18. What is a Wheatstone bridge? When is the bridge said to be balanced? Apply Kirchhoff's laws to describe the balance condition of the Wheatstone bridge.

OR

tion of the same

The state of the s

Find the typical deBroglie wavelength associated with a He atom in helium gas at room temperature (27° C) and 1 atm pressure and compare it with the mean separation between two atoms under these conditions.

19. The current in a coil of self inductance L=2 H is increasing according to the law i=2 sin  $t^2$ . Find the amount of energy spent during the period when the current changes from 0 to 2 ampere.

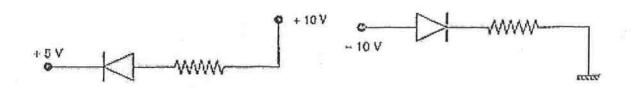
OR

How is mutual inductance of a pair of coils affected when:

- i. separation between the coils is increased
- ii. the number of turns of each coil is increased
- iii. a thin iron sheet is placed between the two coils, other factors remaining the same.
- 20. Describe the principle, construction and working of a pivoted type moving coil galvanometer. Define its figure of merit.
  - 21. Describe the principle, construction and working of heavy positive particle acceleration machine.

Ma - latin himself in the --

5/20



- 22. A cylindrical capacitor has two co-axial cylinders of length 15 cm and radii 1.5 cm and 1.4 cm. The outer cylinder in earthed and the inner cylinder is given a charge of  $3.5 \mu C$ . Determine the capacitance of the system and the potential of the inner cylinder. Neglect end effects (i.e. bending of field lines at the ends).
- 3. Two circular coils made of similar wires but of radii 20 cm and 40 cm are connected in parallel. What will be the ratio of the magnetic field at their centres?

OR

Describe the important properties of diamagnetic substance.

24. Define Hystenesis in Magnetic material. What is the significance of the area of hystenesis loop?

#### Section-D

25. Define the term electric field intensity. Write its SI unit. Derive an expression for the electric field intensity at a point on the axis of an electric dipole.

#### OR

Find the magnitude of the resultant force on a charge of  $1\mu C$  held at P due to two charges of  $+2\times 10^{-8}C$  and -10<sup>-8</sup>C at A and B respectively. Given AP = 10 cm and BP = 5 cm  $\angle APB=90^\circ$ 

26. A prism is found to give a minimum deviation of 51°. The same prism gives a deviation of 62°48' for two values of the angles of incidence, namely, 46°6' and 82°42'. Determine the refractive angle of the prism and the refractive index of its material.

Two convex lenses A and B of focal lengths 20 cm and 10 cm are placed coaxially 10 cm apart. An object is placed on the common axis at a distance of 10 cm from lens A. Find the position and magnification of the final image.

27. An alternating emf is applied to a series combination of a resistor and a capacitor. Investigate the phase relationship b/w current and emf. Find the impedence of the current.

OR

A double slit is illuminated by light of wavelength  $6000 \mbox{\AA}$ . The slits are 0.1 cm apart and the screen is placed 1 m away.

Calculate:

- i. angular position of 10<sup>th</sup> maximum in radian
- ii. separation of two adjacent minima.

CLASS-12

SUBJECT- MATHS

MM: 80

TIME- 3 Hours

Q: 1 Find value of x, if  $\begin{vmatrix} 2 & 4 \\ 5 & 1 \end{vmatrix} = \begin{vmatrix} 2x & 4 \\ 6 & x \end{vmatrix}$ 

Q: 2 Show that function f defined by  $f(x) = \begin{cases} x \sin \frac{1}{x}, & x \neq 0 \\ 0, & x = 0 \end{cases}$  is continuous at x = 0.

Q:3 If =  $\begin{bmatrix} cos\theta & cos\theta \\ -cos\theta & sin\theta \end{bmatrix}$ , prove that  $A^{-1} = A^{T}$ .

Q: 4 Find  $\frac{dy}{dx}$ ,  $2x + 3y = \sin x$ 

Or

Check the infectivity and subjectivity of function

 $f: N \to N$  is a given by  $f(n) = x^2$ .

Q.5 Let A = R - {3} and B = R - {1}. Consider the function of f: A  $\rightarrow$  B defined by  $f(x) = \frac{x-2}{x-3}$ . Is f one – one and onto.

Q: 6 If  $A = \begin{bmatrix} 2 & 3 \\ 4 & 5 \end{bmatrix}$ , prove that A – A<sup>t</sup> is a skew symmetric matrix.

 $\mathbb{Q}$ : 7 Integrate the function  $tan^2(2x-3)$ .

Q:8 Evaluate  $\int \frac{dx}{x+xlo}$ 

Or

Evaluate the following integral  $\int \frac{sec^2x}{cosec^2x} \; dx \; \; .$ 

Q: 9 Integrate:  $\int \frac{x}{(x^2+1)(x+1)} dx$ 

Q: 10 Find the area of the region bounded by  $y^2 = 9x$ , x = 2, x = 4 and the x-axis in the first quadrant.

-1 0-

If 
$$=\begin{bmatrix} 3 & -2 \\ 4 & -2 \end{bmatrix}$$
 and  $I = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ , then find K. If  $A^2 = KA - 2I$ .

Q: 11 Find the area of the region bounded by the ellipse  $\frac{x^2}{4} + \frac{y^2}{9} = 1$ .

Q: 12 If 
$$y = (tan^{-1}x)^2$$
, show that  $(x^2 + 1)^2y_2 + 2x(x^2 + 1)y_1 = 2$ .  
Or

An edge of a variable cube is increasing at the rate 3 cm/sec. How fast is the volume of the cube increasing when the edge is 10 cm long?

Q: 13 If  $(n) = \frac{4x+3}{6x-4}$ ,  $x \neq \frac{2}{3}$ , show that  $f \circ f(x) = x$  for all  $x \neq \frac{2}{3}$ . What is the inverse of f?

If  $f: N \to N$  is defined by  $f(n) = \begin{cases} \frac{n+1}{2}, & \text{if } n \text{ is odd} \\ \frac{n}{2}, & \text{if } n \text{ is even} \end{cases}$  for all  $n \in N$ . Find whether the function

is bijective.

Q: 14 Show that  $\cos\left(2tan^{-1}\frac{1}{7}\right) = \sin\left(4tan^{-1}\frac{1}{3}\right)$ .

Q: 15 Find the no. a and b such that  $A^2 + aA + bI = 0$ . Hence find  $A^{-1}$ .  $A = \begin{bmatrix} 3 & 2 \\ 1 & 1 \end{bmatrix}$ .

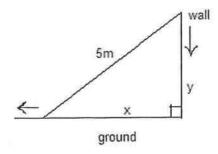
Q: 16 Check the continuity of the following function at the indicated point.

$$f(x) = \begin{cases} \frac{1 - \cos x}{x^2}, & \text{if } x \neq 0 \\ 5, & \text{if } x = 0 \end{cases} \text{ at } x = 0$$

If 
$$y = \begin{vmatrix} f(x) & g(x) & h(x) \\ l & m & n \\ a & b & c \end{vmatrix}$$
 Prove that  $\frac{dy}{dx} = \begin{vmatrix} f'(x) & g'(x) & h'(x) \\ l & m & n \\ a & b & c \end{vmatrix}$ 

Q: 17 Prove that 
$$\begin{vmatrix} 1 + a^2 - b^2 & 2ab & -2b \\ 2ab & 1 - a^2 + b^2 & 2a \\ 2b & -2a & 1 - a^2 - b^2 \end{vmatrix} = (1 + a^2 + b^2)^3$$

Q: 18 A ladder 5m long is leaning against a wall. The bottom of the ladder is pulled along the ground away from the wall, at the rate 2 cm/s. How fast is its height on the wall decreasing when the foot of the ladder is 4m away from the wall.



Q: 19 Find 
$$\int \frac{2x}{(x^2+1)(x^2+2)^2} dx$$
.

Q: 20 Integrate the function  $sec^2x$ .

Q: 21 Using elementary transformation, find the Inverse of matrix.

$$A = \begin{vmatrix} 2 & 0 & -1 \\ 5 & 1 & 0 \\ 0 & 1 & 3 \end{vmatrix}$$

Oı

Differentiate w.r. to x

Q: 22 Verify mean value theorem if  $f(x) = x^3 - 5x^2 - 3x$  in the interval [1,3] . Find all  $c \in [1,3]$  for which f'(c) = 0.

Q: 23 Find the equation of the tangent to curve  $y = \sqrt{3x-2}$  which is parallel to the line 4x-2y+5=0.

Q: 24 The sum of three numbers is 6. If we multiply third number by 3 and add second number to it, we get 11. By adding first and third number, we get double of the second number. Represent it algebraically and find the numbers using matrix method.

Solve the system of equations:

$$\frac{2}{x} + \frac{3}{y} + \frac{10}{z} = 4$$

$$\frac{4}{x} - \frac{6}{y} + \frac{5}{z} = 1$$

$$\frac{4}{x} - \frac{6}{y} + \frac{5}{z} = 1$$
$$\frac{6}{x} + \frac{9}{y} - \frac{20}{z} = 2$$

Q: 25 Show that the right circular cylinder of given surface and maximum volume is such that its height is equal to the diameter of the base.

Q:26 Find the area bounded by the lines 
$$y = 4x + 5$$
,  $y = 5 - x$  and  $4y = x + 5$ .

Using integration, Prove that the curves  $y^2 = 4x$  and  $x^2 = 4y$  divide the area of the square bounded by x = 0, x = 4, y = 4 and y = 0 into three equal parts.

Q27 Using method of integration, find the area of region bounded by equations:

$$2x + y = 4$$
,  $3x - 2y = 6$ ,  $x - 3y + 5 = 0$   
Or

For the matrix  $A = \begin{vmatrix} 1 & 1 & 1 \\ 1 & 2 & -3 \\ 2 & -1 & 3 \end{vmatrix}$  Show that  $A^3 - 6 A^2 + 5 A + 11 I_3 = 0$ , Hence find  $A^{-1}$ .

Q: 28 Integrate 
$$\int \frac{\sqrt{x^2+1}[\log(x^2+1)-2\log x]}{x^4} dx$$

Q: 29 Express the matrices as the sum of a symmetric and a skew symmetric matrix.

$$A = \begin{bmatrix} 3 & 3 & -1 \\ -2 & -2 & 1 \\ -4 & -5 & 2 \end{bmatrix}$$

#### **SUMMATIVE ASSESSMENT 2019-20**

CLASS- 12TH

SUBJECT: BIOLOGY

MM: 50

TIME: 3 Hours

Note: (a) Question no. 1 to 5 each of 1 mark.

- (b) Question no. 6 to 23 each of 2 marks.
- (c) Question no. 24 to 26 each of 3 marks.
- Q: 1 A human zygote has XXY sex chromosomes along with 22 pairs of autosomes. What sex will the individual be?
- Q: 2 Define linkage.
- Q: 3 What is Amniocentasis?
- Q: 4 What is the Ploidy of PEN?
- Q: 5 What is meant by emasculation? Why and when does a plant breeder employ this technique?
- Q: 6 Complete the steps for separation and isolation of DNA fragments.
  - a) DNA fragments separates in matrix of..........
  - b) DNA fragments are stained with.....
  - c) DNA fragments are viewed under.....
  - d) Fragments are extruded from gel piece. This is called.....
- Q: 7 What are histones?
- Q: 8 Give an account of surgical sterilization methods in males and females.
- Q: 9 Difference between Exonuclease and Endonuclease.
- Q: 10 Which Microbe converts milk to curd?
- Q: 11 What are the primary lymphoid organs?
- Q: 12 Elaborate the asexual mode of reproduction in the following:
  - a) Chlamydomonas
  - b) Hydra
  - c) Yeast
- Q: 13 What are the symptoms of the disease which is confirmed by a Widal test?
- Q: 14 What are the major causes of cancer?
- Q: 15 How can DNA fragments be separated on basis of size?
- Q: 16 What are the complexities involved in transcription of eukaryotic DNA?
- Q: 17 Difference between primary and secondary treatment.
- Q: 18 Three Codons on mRNA are not recognized by t RNA. What are they? What is the general term used for them? What is their role in protein synthesis?

- Q: 19 In peas, tallness is dominant over dwarfness, and red colour of flowers is dominant over the white colour. When a tall plant bearing red flowers was pollinated by a dwarf plant bearing white flowers, the different phenotypic groups were obtained in the progeny in numbers mentioned against them.
  - Mention the genotypes of the two parents and of the types of four offspring.
- Q: 20 Is pollination and fertilization necessary in apomixes? Give reasons.
- Q: 21 How BOD is related to water pollution?
- Q: 22 Show diagrammatically stages of embryonic development from zygote up to implantation in Humans.
- Q: 23 Describe the Fredrick Griffith's experiment to prove that DNA is the basic genetic material.
- Q: 24 How does the pollen mother cell develop into mature pollen grain. Illustrate the stages with a labeled diagram OR show diagrammatically stages of embryonic development from zygote up to implantation in Humans.
- Q: 25 Who demonstrated the semi-conservative replication of DNA? Explain the procedure in detail.
- Q: 26 Explain sickle cell anemia and its inheritance as a pedigree chart.