

Annual Examination 2018 – 19**Time: 3:00 Hrs.****M. M. 100**

General Instructions:-

| | | |
|-------------|------------------------------------|----|
| SECTION – A | READING | 20 |
| SECTION – B | WRITING & GRAMMAR | 30 |
| SECTION – C | LITERATURE & LONG READING | 30 |
| SECTION – D | LISTENING SKILLS & SPEAKING SKILLS | 20 |

Q.1 Read the following paragraph and answer the questions:

1. Few guessed that this quiet parentless girl growing up in New York City would one day become the First Lady of the United States. Even fewer thought she would become an author and lecturer and woman much admired and loved by people throughout the world.
2. Born Anna Eleanor Roosevelt in 1884 to wealthy, but troubled parents who both died while she was young, Roosevelt was cared by her grandmother and sent to school in England. In 1905, she married to her distant cousin, Franklin Delano Roosevelt. She and her husband had six children. Although they were wealthy, her life was not easy and she suffered several personal tragedies. Her second son died when he as baby. In 1921, her strong athletic husband was stricken with polio, which left him physically disabled for life.
3. Eleanor Roosevelt was a remarkable woman who had a great intelligence and tremendous strength of character. She never let thing get down. She nursed her husband back to good health and encouraged him to remain in good health and encouraged him to remain in politics. She then helped him to become the governor of New York, and in1933, president of United States.
4. While he was president, she took great interest in all the affairs of the country. She became her husband's legs and eyes; she visited prisons and hospital; she went down into mines, up scaffolding, and into factories. Roosevelt was tireless and daring. During the depression she travelled all over the country bringing goodwill, reassurance, and help to people without foods and jobs. During World War II She visited Americans soldiers in camps all over the world. The United States had never known a First Lady like her.
5. Roosevelt also kept in touch with the American people through a daily newspaper column called "My Day". She broadcast on the radio and delivered lectures, all firsts for a First Lady.

1.1. Choose the most appropriate answer:**6**

- (1) Eleanor was a strong woman who helped her husband to become:

| | |
|---------------------------------|---------------------------------|
| (a) President of America | (b) Prime Minister of America |
| (c) Foreign Minister of America | (d) Finance Minister of America |
- (2) She was in touch with American people through:

| | | | |
|----------------|---------------|-------------|-----------|
| (a) conference | (b) newspaper | (c) meeting | (d) radio |
|----------------|---------------|-------------|-----------|
- (3) Give the synonym of 'suffering severely' from para 2.

| | | | |
|--------------|--------------|-------------|--------------|
| (a) stricken | (b) disabled | (c) wealthy | (d) strength |
|--------------|--------------|-------------|--------------|
- (4) Give the antonym of 'miniature' from para 3.

| | | | |
|----------------|--------------|----------------|-----------|
| (a) tremendous | (b) strength | (c) remarkable | (d) great |
|----------------|--------------|----------------|-----------|
- (5) Give the antonym of 'irregular' from para 5.

| | | | |
|-----------|------------|-------------|-----------|
| (a) daily | (b) column | (c) lecture | (d) first |
|-----------|------------|-------------|-----------|
- (6) Give the synonym of 'generosity' from para 4.

| | | | |
|--------------|----------------|--------------|--------------|
| (a) goodwill | (b) depression | (c) interest | (d) tireless |
|--------------|----------------|--------------|--------------|

1.2 On the basis of your reading answer the following questions:**6**

1. How was Eleanor Roosevelt's personality in contrast to what she became?
2. She faced challenges in personal life but remained unfazed. Is this statement true?
3. What does the statement 'she became her husband's legs and eyes' mean here?
4. What was her special contribution during the depression?
5. Apart from being the first lady what other firsts did she have to credit?
6. What side of her personality gets reflected in the passage?

Q.2 Read the following paragraph:

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 excess of work is always very painful. However, work is not most people less painful than idleness. There are in grades, from mere relief to tedium upto the profoundest delights, according to the nature of the work and the abilities of the worker.

Most of the idle rich suffer unspeakable boredom as the price of their freedom from drudgery. At times they may find relief by hunting big game in Africa or by flying round the world, but the number of such sensation is limited, especially after youth is past. Accordingly, there 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, for the boredom that a man feels when he is doing something out of compulsion; though uninteresting work is as boring as having nothing to do. With this advantage of work, another is associated, namely that it makes holidays much more delicious when they come. Provided a man does not have to work so hard as to impair his vigour, he is likely to find far more zest in his free time than an idle man could possibly find.

The second advantage of most paid work and some 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 maybe, it 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-heading. Using recognizable abbreviations wherever necessary (mini 4). Supply an appropriate title to it.

5

(b) Write a summary of the above passage in about 80-100 words.

3

SEC –B (WRITING & GRAMMAR) 30 marks

Q.3 You are the Finance Manager, Basic Investments, Kolkata. Write out a suitable newspaper advertisement offering tempting and liberal terms on loans to your prospective clients.

4

OR

An NGO has approached your school to offer book grants to the needy students. As Head girl of Sunshine Public School, Aram bagh, write a notice in about 50 words asking students who are in need to put their requests into the box kept outside the Principal's office.

Q.4 You are Sugand/Sunil of Motihari, Bihar. You are upset to find that the only public garden of your locality has been grabbed by the local political party for their party work. Write a letter to the Editor of The Hindu drawing the attention of the government to this unauthorized occupation and the problems it is causing the residents of that area.

6

OR

You are Farookh Abbasi/Fatima Ali. You come across an advertisement for the post of human resource trainees required by ABC Company, New Delhi. Candidates are expected to possess good communication skills and be familiar with the use of computers. Apply for the job with the covering letter and complete bio-data.

Q.5 As a cub reporter for the Times of India, Delhi, you have been asked to write a report on the Delhi Book Fair being held at Pragati Maidan for a week. The theme is Global Literature. Write the report inventing details wherever necessary. (150-200 words)

10

OR

Every day at the traffic lights people are accosted by little children selling pencils or toys or just begging for some money. Dinesh, the Head Boy of his school has been thinking of ways and means of dealing with this problem. He writes an article for his school magazine to discuss this problem and give his viewpoint of the problem and the solutions.

Q.6 There is an error in each line. Write the incorrect word and the correct one against the corresponding blanks:

1 x 4 = 4

Demonetization is the withdrawal of the particular form (a).....

of currency for circulation. Through demonetization, (b).....

the old currency is replaced by a new currency or a (c).....

currency circulation is blocked. There were multiple (d).....

reasons for demonetization.

Q.7 Rearrange the given words/phrases to form sensible sentences: 1x3 = 3

- a) fitness tracker /fitness-related /device /metrics /is a/ for monitoring
- b) it / and heartbeat/ measures /or run /calorie consumption/ distance walked
- c) these / are/ a computer/ or a smart phone/ smart watches/ synced to

Q.8 Fill up the given blanks choosing the most appropriate option from the ones given below:

$\frac{1}{2} \times 6 = 3$

The aloe vera plant is about one (a)----- two feet tall with prickly and bitter leaves, which (b)----- as a defence to keep animals and insects from (c)----- on the plant. Nowadays, aloe vera is widely (d) ----- for medicinal purposes. The aloe vera leaves hold a gooey translucent (e) ----- bitter gel. It is (f) ----- all over the world for its unbelievable healing properties.

- | | | | |
|----------|---------|--------|--------|
| (a) and | or | but | still |
| (b) act | acted | acting | acts |
| (c) feed | feeding | feeds | fed |
| (d) use | used | uses | useful |
| (e) and | or | but | still |
| (f) know | known | knew | knows |

SEC -D (LITERATURE) 30marks

Q.9 Read the following extract given below and answer the following questions:

Yet have I killed
The seed I spent or sown it where
The land is his and none of mine?

- (a) Who is 'He' here? 1
- (b) What does the last line mean? 1
- (c) What is the poetic device used above? 1

OR

*"And who art thou? Said I to the soft-falling shower,
which, strange to tell, gave me an answer, as here translated"*

- a) Whom did the poet ask the question? Did he get the answer? 1
- b) In what form did the poet get an answer? 1
- c) What do you understand by the phrase 'strange to tell'? 1

Q.10 Answer any three of the following questions in 30-40 words: 3x3= 9

- (i) Why did the narrator reach the station without having paid much attention to the things on the way?
- (ii) Which are the Earth's principal biological systems? How are they important?
- (iii) Why was a melon made the king of the city?
- (iv) Describe the title of the story 'We're Not Afraid to Die'.

Q.11 Answer the following questions in about 125-150 words: 6

How did the relationship between the author and his grandmother change after they moved to the town?

OR

Give a character sketch of Frank the science teacher?

Q.12 Answer the following questions in about 125-150 words: 6

Justify the title of the story 'Birth'.

OR

What do you understand of Einstein's nature from his conversation with his history teacher, mathematics teacher and the head teacher?

Q.13 Answer the following questions in about 125-150 words: 6

'We have not inherited this Earth from our forefathers; we have borrowed it from our children.' Justify the statement of Lester R Brown.

OR

Describe Professor's bitter experience in the Azad Maidan. Why did he convey his regrets to the organisers of the Panipat seminar?

SEC -E (LISTENING & SPEAKING SKILLS) 20marks

Annual Examination 2018 – 19

Time: 3:00 Hrs.

M. M. 70

General Instructions:

- All questions are compulsory. There are 27 questions in all.
- This question paper has four sections. Section A contains five questions of 1 mark each, Section B contains seven questions of 2 marks each, Section C contains twelve questions of 3 marks each and Section D contains three questions of 5 marks each.
- There is no overall choice. However, an internal choice has been provided in two questions of one mark, two questions of two marks, four questions of three marks and three questions of five marks. You have to attempt only one of the choices in such questions.
- Use of calculators is not permitted. However, you may use log tables, if necessary.

Section - A

- Can $\vec{A} + \vec{B} = \vec{A} - \vec{B}$? Explain.
- Do all solids expand on heating? If not give an example?
- Is the equation $PV=RT$ valid for isothermal and adiabatic process?
- When will a real gas behave as ideal gas?
- A passing aeroplane some times causes the rattling (vibration) of the windows of a house. Why?

Section – B

- Write the limitations of 1st law of thermodynamics?
- In a harbor, wind is blowing at the speed of 72 km/h and the flag on the mast of a boat anchored in the harbor flutters along the N–E direction. If the boat starts moving at a speed of 51 km/h to the north, what is the direction of the flag on the mast of the boat?
- A bird is sitting on the floor of a wire cage and the cage is in the hand of a boy. The bird starts flying in the cage. Will the boy experience any change in the weight of the cage? Explain.
- State and prove work-Energy theorem for variable force?
- A solid cylinder of mass 20 kg rotates about its axis with angular speed 100 rad/sec. The radius of the cylinder is 0.25 m. What is the kinetic energy associated with the rotation of the cylinder? What is the magnitude of angular momentum of the cylinder about its axis.
- At what height from the surface of the earth, will the value of g be reduced by 36% from the value at the surface? Radius of earth = 6400 km.

OR

A body weight 63 N on the surface of the earth. What is the gravitational force on it due to the earth at a height equal to half the radius of the earth?

- Water rises in a capillary tube, whereas mercury falls in capillary tube. Explain?

Section – C

- Derive expression for the kinetic and potential energies of a simple harmonic oscillator.
 - A block whose mass is 1 kg is fastened to a spring. The spring has a spring constant of 50 N/m. The block is pulled to a distance $x = 10$ cm. from its equilibrium position $x = 0$ from rest at $t = 0$ calculate kinetic and potential energy of the block when it is 5 cm away from mean position.
- Using the law of equipartition of energy, predict the specific heat of water. How does the specific heat of water vary with temperature. Explain with suitable graph.
- Explain why are beams or girders give “I” shape?
 - A steel wire of length 4.7 m and cross-section $3 \times 10^{-5} \text{ m}^2$ stretches by the same amount as copper wire of length 3.5 m and cross-section $4 \times 10^{-5} \text{ m}^2$ under a given load. What is the ratio of the young's modulus of steel to that of copper?
- State Doppler's effect and find apparent frequency of sound when –
 - Observer move towards stationary source.
 - Source move towards stationary source.
 - Source and observed both moves towards each other.

Q.17 Define Carnot cycle and find net work done in this process?

OR

Find out relation between focal length refractive index and radius of curvature (lens maker relation).

Q.18 State & prove Newton's law of cooling. Deduce the relation $T = T_0 + ce^{-kt}$.

Q.19 State kirchhoff's law of heat radiation and give suitable example?

Q.20 Find moment of inertia of a rod of length ℓ about axis of rotation and about a tangent to one end of rod.

OR

Find center of mass of cone.

Q.21 Prove that in an elastic one dimensional collision between two bodies, the relative velocity of approach before collision is equal to the relative velocity of separation after the collision.

Q.22 State 3rd law of motion & explain it with an example.

OR

Draw diagram for compound microscope and find magnification.

Q.23 The resultant vector of \vec{P} and \vec{Q} is \vec{R} . On reversing the direction of \vec{Q} , the resultant vector becomes \vec{S} . Show that $R^2 + S^2 = 2(P^2 + Q^2)$.

Q.24 A body travels uniformly a distance of (13.8 ± 0.2) m in a time (4.0 ± 0.3) sec. Calculate its velocity with error limits. What is percentage error in velocity?

OR

Find the gravitational potential energy of a system of four particles, each of mass m , placed at the vertices of a square of side l . Also obtain the potential at the centre of the square.

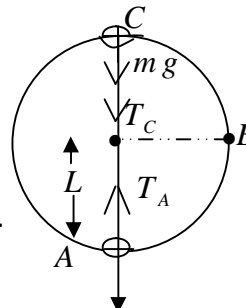
Section – D

Q.25 A bob of mass m is suspended by a light string of length L . It is imparted a horizontal velocity v_0 at the lowest point A such that it completes a semi-circular trajectory in the vertical plane with the string becoming slack only on reaching the topmost point C. This is shown in fig. obtain an expression for :

(i) v_0 ,

(ii) The speeds at points B and C

(iii) the ratio of the kinetic energies (K_B/K_C) at B and C.



OR

Find moment of Inertia of uniform sphere about axis of rotation and also find radius of gyration?

Q.26 (i) State and prove Bernocilli's principle for the flow of non-viscous fluids.

(ii) What is a venturimeter? Describe its construction and working?

OR

What are beats? How are they produce show that beats frequency for maximum and minimum amplitude is $n_1 - n_2$

Q.27 (i) On the basis of kinetic theory, derive an expression for the pressure exerted by an ideal gas.

(ii) Show that the average K.E. of a gas molecule is directly proportional to the temperature of the gas?

OR

State law of equipartition of energy, determine the values of C_p , C_v and r for :

(i) Monoatomic (ii) Diatomic (iii) triatomic (iv) Polyatomic gases

Roll No. _____

Code. No. 11/Business Studies/NLCS/70
Annual Examination 2018 – 19

Time: 3:00 Hrs.

M. M. 90

General Instruction :

- (i) All questions are compulsory. Marks are indicated against each questions.
- (ii) Answer to questions carrying 1 Mark may be one word to one sentence.
- (iii) Answer to questions carrying 3 Marks may be from 50-75 words.
- (iv) Answer to questions carrying 4-5 marks may be about 150 words.
- (v) Answer to questions carrying 6 marks may be about 200 words.

- Q.1 What is meant by trade credit? 1
- Q.2 Established in 1980, Sugar & Spice Ltd. is dedicated to providing superior quality herbs, spices, and custom blends to food manufacturers and food service distributors. The company prides in sourcing products that the customers can use with confidence and trust. Sugar & Spice Ltd. has to supply 200 kg. turmeric powder to Angel Enterprises. The company agrees to bear all the expenses upto Cochin port for Angel Enterprises.
Identify the term of trade used by Sugar & Spice Ltd. 1
- Q.3 Tente International Ltd. has been promoted by its directors and all legal formalities pertaining to promotion and incorporation have been complied with. After the receipt of 'Certificate of Incorporation' the company has legally come into existence. Now the company wishes to raise funds from the public.
Name the next stage in the formation of a company. 1
- Q.4 The Government of India had announced Industrial Policy in 1977 wherein special stress was given on the development of small scale industries in rural area. To achieve this objective numerous agencies are set up at district level.
State any one function of this agency. 1
- Q.5 National Textile Corporation, a public enterprise set up in Andhra Pradesh was running into huge losses for the past three years. It was declared a sick unit by the government. Therefore, the directors decided to close down the unit. But the government wanted to restructure it in the favour of employees.
Which policy regarding sick units will be adopted by government in this case? 1
- Q.6 What is meant by discretionary responsibility of business? 1
- Q.7 Santosh Anand has recently bought some tea gardens in Assam which produce a good crop every year. Presently he is supplying tea only to the nearby areas but he wants expand his business and supply it to states of Gujarat and Maharashtra as well.
State the auxiliary to trade which will help him to achieve his goal. 1
- Q.8 Distinguish between visible trade and invisible trade. 1
- Q.9 What are the incentives provided by the Government for industries in backward and hilly areas? 3
- Q.10 Seema after completing her MBA realized that her family needs extra income as her father was about to retire. So, she decided to set up a garment manufacturing unit. She received order for 500 shirts. Seema started purchasing raw materials from local suppliers to complete the order of shirts. As she completed the order on time the other purchasers also started giving orders to Seema on regular basis. Her hard work and sincerity resulted in huge profits and led to the growth of the business. After two years there were communal riots in her city due to which her profits were adversely affected. The availability of labour became a problem and Seema started suffering loss. After analysing the situation for few months she decided to shut down the business.
Identify and explain any three characteristics of business highlighted above and quote the relevant lines. 3
- Q.11 Briefly explain the concept of public private partnership. 3
- Q.12 Elucidate the various types of facilities offered by Indian Postal Department. 3
- Q.13 Discuss any three limitations of electronic mode of doing business. 3
- Q.14 Safe Electronix, an European company manufacturing washing machines wish to expand its product line by launching new products in India namely air conditioners and refrigerators. Out of the list of authorized dealers the company selected a twenty five year old, electronic wholesale firm whose proposals was very competitive. This wholesale firm of washing machines took the services of Rohit Enterprises to sell washing machines at competitive prices in Delhi. Rohit informed wholesale firm that the consumers of

Delhi wish to buy vacuum cleaner of same brand. He assured wholesale firm that he will take appropriate steps to implement the company's promotional schemes and offers from time to time.

On the basis of the given information about Safe Electronix, answer the following questions :

- (i) Explain two services rendered by Rohit Enterprises to wholesale firm which are highlighted in the above case.
- (ii) Explain one services rendered by Rohit Enterprises to the consumers. 3

Q.15 Long before Columbus set sail for America and the Phoenicians set sail for the Mediterranean the ancient Indians were aware of the waves, tides and stars, wise in trade and commerce and knew the value of rubies and diamond. India with it 5000 years history of maritime activity and 6000 km coast has played a major role in commerce and cultural interaction between the East and West. Thousands of ships have crossed the Indian Ocean and many were lost in nautical calamities, piracy and warfare.

It seems that around the beginning of the Christian era, the monsoon was understood, and this enabled sailors to sail in much less time directly from the eastern coast of the Arabian Sea to the western coast, and easily be at the various index of prosperity on the route such as Broach situated on the weatern coast of India, and Tamralipti situated on the eastern coast. Of all these indices, Broach seems to have been the most important and prosperous. Through it was the passage of not only commodities produced in the Satavahana kingdom but also the produce of the Shaka and Kushan kingdoms. The Shakas and the Kushans used two routes from the north-western frontier to the western sea coast. Both these routes converged at Taxila, and were connected with the silk Route passing through Central Asia.

On the basis of the given information about ancient India, answer the following questions :

- (i) State the concept used in ancient India whose existence is an index of prosperity of merchant communities and professional classes.
- (ii) Enlist the important kinds of concept whose existence is an index of prosperity of merchant communities and professional classes.
- (iii) Enlist any two examples of the concept used in ancient India whose existence is an index of prosperity of merchant communities and professional classes. 4

Q.16 Identify the documents highlighted in the following statements :

- (i) Agreement signed with the shipping company to enable to put goods on the ship.
- (ii) Document issued by the captain of the ship after loading the goods on the ship.
- (iii) Assured payment on the strength of a document issued by the importers bank.
- (iv) Document which authorizes the bank to sell the goods in case of dishonor of bill. 4

Q.17 Environment is important for all of us, we have a collective responsibility to protect it from being spoiled. Whether it is government, business enterprise, consumers, workers, or other members of society, each one can do something to stop polluting the environment.

Government can enact laws to ban hazardous products. Consumers, workers and the members of society can avoid using certain products and doing things that are not environment friendly.

Emission of smoke and gases from factories, Use of machines causing noise pollution, Deforestation, Growth of industrialization are some of the ways in which business causes pollution. So, the business enterprises should, take the lead in providing their own solution to environmental problems. It is the social responsibility of every business to take steps not only to check all sorts of pollution but also to protect environmental resources.

On the basis of aforesaid information, elucidate the types of roles that a business enterprise can play to control environmental pollution. 4

Q.18 Super Design Exports a profitable readymade garments factory was operated by Naresh Singh and his brother for the past three years using environment friendly techniques. As they were earning handsome returns, they wanted to expand their operation by opening another factory. As the second factory is being planned the administrator suggested the owner to assign the cafeteria, house-keeping and security contracts to outside agencies. The owner did not seem very happy with the idea initially as he was worried about the quality of work these agencies might do, but he still tried and was very happy with the outcome.

On the Basis of aforesaid information, answer the following Questions :

- (i) Identify and explain the concept of business highlighted in the case.
- (ii) Mention any two values followed by the company by adopting the aforesaid concept. 4

- Q.19 Subash Yadav completed a vocational course in entrepreneurship and decided to set up his own business of manufacturing fans in his village. He sets up an enterprise by investing ` 15 lakh in plant and machinery. He also employed 25 people from his village as well as neighbouring village.
On the basis of aforesaid information, answer the following questions :
- Identify the category of small enterprise set up by Subash Yadav.
 - Explain any three reasons highlighting the role of such enterprises in development of the country.
- 4
- Q.20 Your class teacher discussed about few bodies which were formed as an association of business and industrial houses to promote and protect their common interest and goals. Many such bodies were formed and are present in the country. These associations help in many activities concerning interstate movement of goods which includes registration of vehicles, surface transport policies, construction of highways and roads.
Identify the body mentioned above and explain how they assist in :
- Transportation or interstate movement of goods.
 - Octroi and other local levies.
 - Harmonization of sales tax structure and Value Added Tax.
 - Marketing of agro products and related issues.
- 5
- Q.21 Automotive Systems Corporation Ltd. is one of the largest suppliers of road vehicles electronic and mechanical security system. The company has a diversified product portfolio encompassing from mechanical & electronic security system, door system, electronic controllers for electric vehicles and plastic interiors across the globe. The company plans to set up a new unit to manufacture die casting parts and high class surface finishing parts for auto and consumer durable industry.
The company needs rupees seventy crore as additional capital to fund its new unit. Atul Jalan, the CEO of the company wanted to raise funds through issue of equity shares. On the other hand, the Finance Manager Nimi Sahdev said that the public issue may be expensive on account of various mandatory and non-mandatory expenses. Therefore, it was decided to borrow from a special institutions.
On the basis of aforesaid information, answer the following questions :
- Identify the source of fund specified above by quoting lines from the case.
 - State any two merits of raising funds through the source specified in part (a).
 - State any two demerits of raising funds through the source specified in part (a).
- 5
- Q.22 Distinguish between 'Memorandum of Association' and 'Articles of Association.' 5
- Q.23 Mr. Kailash Kapur is the owner of toy making factory. He got his factory insured against fire. One day an accidental fire broke out in the factory. Mr. Kailash made a claim for the damages suffered from the insurance company. The Insurance Company accepted his claim. However, he refused to hand over the damaged property to Insurance Company. The Insurance Company filed a case against him. The court directed Mr. Kailash to hand over the goods to the Insurance Company.
On the basis of the given information about Mr. Kailash, answer the following questions :
- On the basis of which principle of Insurance the court has passed a judgment in favour of Insurance company?
 - Is Mr. Kailash justified in his stand?
 - Explain the relevant insurance principle in this regard.
- 5
- Q.24 In 1983, when Stride arcolabs was set up, it only dealt with two cities in India – West Bengal and Bihar. In 1985, it started trading nationally and by 2000, company made its way through the international market. Products used in cardiology were manufactured in 1987 and at that time, Montrate was one of the first products that was launched and went on to become a best-seller. In 1993, Stride Pharmaceuticals Industries set up their own research institute STIRI. STIRI became popular by generating knowledge and honing process development skills across the world. In 1994, Stride Pharma enrolled itself in the main stock exchanges in India. Stride Pharmaceuticals shifted its headquarters in Mumbai as it is at the center of Indian commercial trade. The company began its first international acquisition with an amount of US\$ 7.5 million, acquiring international Pharm Lab in Detroit. Later on, the company introduced a few more treatment areas which include orthopedics, gynecology and oncology.
On the basis of the given information about Stride arcolabs, answer the following questions :
- Identify the type of business enterprise highlighted by quoting the lines from above case.

- (ii) Explain any four features of the type of business enterprise identified in above question. 6
- Q.25 Identify the sources of finance highlighted in the following cases :
- (i) This source is not redeemed during the life of the company.
 - (ii) This source facilitates the purchase of goods and services without making immediate payment.
 - (iii) In case of winding up of the company, the capital is refunded after payment of debentures but before payment of equity shares.
 - (iv) This source put a permanent obligation on the company to pay interest every year irrespective of profits.
 - (v) The holders of this source enjoy right to vote and control the company.
 - (vi) This source involves internal financing or self financing. 6
- Q.26 Rahul was amateur cook and liked to try out different cuisines. But he found it very difficult prepare non-traditional exotic dishes as it was very difficult to find their ingredients. When he tried to solve this problem by ordering online, he realized that the current portals were not reliable. In fact, he realized that many people were facing a similar problem. When he inherited some money from a distant relative, he decided to invest this amount in a business venture. He identified the ingredients that were ordered more frequently and entered into long term agreement with the suppliers from different countries and he started an online portal where people could order ingredients required for exotic cuisines. Once he obtains necessary foreign exchange and he placed his order.
Explain the steps that he needs to follow to complete the import procedure.
- Q.27 Over the past decade, Raksha Ahuja has been operating a neighbourhood corner shop selling accessories such as artificial jewellery, ladies purses, hair clips and nail art. With the increase in demand of fashion products, her product's demand was also rising. So, she decided to set up a bigger unit by attracting capital from the public and making them members in the enterprise. She fulfilled the necessary formalities for this purpose.
On the basis of aforesaid information about Raksha Ahuja, answer the following questions :
- (i) Identify the type of business organization Raksha Ahuja has been managing for many years.
 - (ii) Explain any two demerits of the organization identified in part (i).
 - (iii) Identify the type of organization she wants to venture in.
 - (iv) Explain any two merits of the organization identified in part (iii). 6

Roll No. _____

Code. No. 11/Biology/NLCS/13

Annual Examination 2018 – 19

Time: 3:00 Hrs.

M. M. 70

GENERAL INSTRUCTIONS:

1. All questions are compulsory. The question paper consists of 4 sections A, B, C and D.
2. Internal choice is given in all the sections. **A student has to attempt only one of the alternative in such questions.**
3. Section- A has 5 questions of 1 mark each. Section- B has 7 questions of 2 marks each.
4. Section- C has 12 questions of 3 marks each. Section- D has 3 questions of 5 marks each.
5. Wherever necessary, the diagrams drawn should be neat and properly labelled.

Section - A

Q.1 Write the name of enzymes which are used in fermentation of yeast and bacteria.

OR

Explain the term the codont and phycobiont.

Q.2 What is difference between phycobiont and mycobiont?

Q.3 What is double fertilization?

Q.4 Difference between chordates and Non-chordates.

Q.5 Write the name of different types of placentation.

OR

Write any two disorders of digestive system.

Section - B

Q.6 Draw diagram of monocotyledon seed.

OR

Define Glomerular filtration rate (GFR).

Q.7 Draw transverse section of Dicot stem.

Q.8 Difference between all simple Epithelium tissue.

Q.9 Write the different types of Plastids and their work.

Q.10 What is concept of activation energy with the help of graph?

Q.11 Explain all the four stages of M-Phase with diagram.

Q.12 What are steps of conversion of atmospheric nitrogen to ammonia by nitrogenase enzyme?

OR

Write the difference between P-wave and T-wave.

Section – C

Q.13 What are the steps of glycolysis?

Q.14 Difference between Auxin and Abscisic acid plant growth regulators.

Q.15 What are the different types of juices are secreted by small intestine?

Q.16 Draw diagram of exchange of gases at the alveolus and the body tissue with blood. (alveolus)

Q.17 Explain Cardiac cycle.

OR

Explain micturition.

Q.18 What is mechanism of muscle contraction?

Q.19 What is the process of transmission of Impulses?

Q.20 Write short note on secretion of hormones by pituitary gland.

Q.21 Draw diagram of eye.

Q.22 Difference between various classes of fungi.

OR

Difference between various classes of Algae.

Q.23 Difference between chondrichthyes and Osteichthyes. Classes of pisces.

OR

All vertebrates are chordates but all chordates are not vertebrates. Justify this statement.

Q.24 Explain and draw diagram of Alimentary canal of cockroach.

OR

Explain different types of chromosomes based on the position of centromere.

Section – D

Q.25 Draw diagram of nephron and write the different steps of urine formation.

OR

Describe Electron transport system with diagram.

Q.26 Explain Cirtric acid cycle.

OR

Explain (i) Haplontic(ii) Diplontic (iii) Haplo-diplontic life cycle of plant.

Q.27 Male reproductive system of cockroach with diagram.

OR

Explain the role of Nitrogen, Phosphours, Pottasium, Calcium and Sulphur nutrients in plants.

Roll No. _____

Code. No. 11/Chemistry/NLCS/33

Annual Examination 2018 – 19**Time: 3:00 Hrs.****M. M. 70****GENERAL INSTRUCTIONS:**

- All questions are compulsory. The question paper consists of 4 sections A, B, C and D.
- Section- A has 5 questions of 1 mark each. Section- B has 7 questions of 2 marks each. Section- C has 12 questions of 3 marks each. Section- D has 3 questions of 5 marks each.

Section - AQ.1 What is the oxidation state & covalency of Al in $[AlCl(H_2O)_5]^{2+}$? 1

OR

Define acid rain.

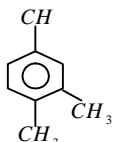
Q.2 Define salt breeze? 1

Q.3 Define $(n + l)$ rule? 1

OR

Define anti Markovnikov rule.

Q.4 Butane or 2methyl propane. Which is having higher boiling point & why? 1

Q.5 Name the compound  1**Section – B**

Q.6 How demineralised water is obtained? 2

Q.7 Calculate the molarity of NaOH in the solution prepared by dissolving its 4g in water to form 250 ml of the solution. 2

OR

What is the concentration of sugar in mol L^{-1} if its 20g are dissolved in enough water of make a final volume up to 2L? 2

Q.8 Determine the molecular formula of an oxide of iron in which the mass percent of iron & oxygen are 69.9 & 30.1 respectively. Molar mass =159.8. 2

Q.9 Draw the structure of C_2H_2, SF_6 . 2

Q.10 A neon-dioxygen mixture contain 70.6g dioxygen & 167.5g neon. If pressure of the mixture of gases in the cylinder is 25 bar what is the partial pressure of dioxygen & neon in the mixture? 2

Q.11 Explain photochemical smog. 2

OR

Define octet rule. Explain its limitations.

Q.12 Explain causes of water pollution. 2

Section – C

Q.13 (i) Predict the formula formed by (a) silicon & bromine (b) Aluminium & sulphur 2+1=3

(ii) Show by reaction with water that Na_2O is basic oxide & Cl_2O_7 an acidic oxide.

Q.14 Explain the Fajan rule. 3

OR

(i) Draw the Lewis structure of CO & NO_2^- .(ii) Explain the stability & Bond order of He_2 & O_2 molecule through mol. 3

Q.15 Write short note on (i) Liquifaction of gases (ii) Vapour pressure 3

Q.16 Explain (i) standard enthalpy of formation (ii) Enthalpy of atomization 3

Q.17 At $60^\circ C$ N_2O_3 is 50% dissociated. Calculate the $\Delta_r G^\theta$ at this temperature at 1 atmosphere. 3Q.18 The value of k_p for the reaction : 3

$CO_2(g) + C(s) \rightleftharpoons 2CO(g)$ is 3.0 at 1000 k. If initially $P_{CO_2} = 0.48\text{bar}$ and $P_{CO} = 0\text{bar}$ and pure graphite is present. Calculate the equilibrium partial pressure of CO & CO_2 .

OR

$N_2(g) + 3H_2(g) \rightarrow 2NH_3(g)$; $\Delta_r H^\ominus = -92.4\text{KJ/mol}$.

What is the standard enthalpy of formation of NH_3 gas?

Q.19 Explain Le chatelier's principle. Also explain the factors affecting it? 3

OR

Explain Hybridisation and its types ?.

Q.20 Balance the reaction : 3

(i) $H_2O_2 + Fe^{2+} \rightarrow Fe^{3+} + H_2O$ (Acidic med)

(ii) $MnO_4^- + I^- \rightarrow MnO_2 + I_2$ (basic med)

Q.21 (i) K_2CO_3 cannot be separated by Solvay process 3

(ii) Discuss various reaction of solvay process?

Q.22 Compare the alkali metals & alkalise earth metals with respect to
(i) ionization enthalpy (ii) basicity of oxides (iii) solubility of hydroxides. 3

Q.23 (i) In sulphur estimation, 0.157g of an organic compound gave 0.4813g of barium sulphate.
What is the percentage of sulphur in the compounds

(ii) Define electrophile & nucleophile. 3

OR

What is the difference between distillation, distillation under reduced pressure & steam distillation?

Q.24 Explain Inductive effect, hyperconjugation effect & electromeric effect. 3

Section – D

Q.25 (i) What happens when : 2+3=5
(a) Borax is heated strongly (b) Boric acid is added to water
(c) BF_3 is reacted with ammonia

(ii) Write short note on (a) Diborane (b) Carbon monoxide

OR

(a) Explain the various quantum number. 3
(b) Define spectrum and explain its types. 2

Q.26 (i) How will you convert benzene No : 2+3=5

(a) P-Nitro tolnene (b) m-nitrochloro benzene

(ii) Write reaction :

(a) Ozonolysis of alkenes (b) OPreparation of alkyne from vicinal dihalide

(a) Wurtz reaction

OR

(i) Draw the *Cu* & ttrans structure of hex-2-ere. Which isomer will have higher b.p. & why? 2+3=5

(ii) Write reactions :

(a) Decarboxylation of aromatic acids (b) Friedel craft acylation

(c) Sulplonation

Q.27 (i) Write short note on photoelectric effect: 2+2+1=5

(ii) Calculate the wavelength frequency & wavenumber of a light wave whose proved is 2.0×10^{-10} sec.

(iii) Anatomic orbital has $n=3$. What are the possible values of l and m_l ?

OR

(i) Write the rules followed white filling electron is orbital. 3+2=5

(ii) Explain dual behavior of matter and Heisenberg uncertainty principle?

Roll No. _____

Code. No. 11/Political Science/NLCS/10
Annual Examination 2018 – 19

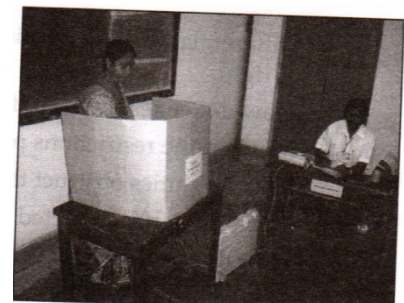
Time: 3:00 Hrs.

M. M. 100

General Instruction :

- (i) All questions are compulsory.
- (ii) Questions 1 to 5 are of One Mark each. The Answer to these Questions not exceed to 20 words each.
- (iii) Questions 6 to 10 are Two Marks each. The Answer these Questions should not exceed 40 words each.
- (iv) Questions 11 to 16 are of Four Marks each. The Answer to these Question should not exceed 100 words each.
- (v) Questions 17 to 18 are passage based, These are of Five Marks each.
- (vi) Questions 19 to 21 are map or picture based. These Questions too are Five Marks each.
- (vii) Questions 22 to 27 are of Six Marks each. The Answer to these Questions should not exceed 150 words each.

- Q.1 Write two obstacles in the path of peace.
- Q.2 In which article of Indian constitution is the right to equality given.
- Q.3 When did the Indian constitution come into force.
- Q.4 Give two examples of political equality.
- Q.5 Who are naturalised citizen?
- Q.6 Why is the constitution called a living document?
- Q.7 "Liberty means absence of restraints? Explain.
- Q.8 Give any two definitions of freedom.
- Q.9 Distinguish between a state and a nation.
- Q.10 Do you agree with the following statement write the reason for supporting or opposing.
"Secularism does not allow us to have a religious identity"?
- Q.11 Describe the main function of a constitution.
- Q.12 Distinguish between FPTP system and proportional system of representation.
- Q.13 Examine the federal features of the Indian constitution.
- Q.14 What is Political inequality?
- Q.15 Mention four grounds for inclusion of citizenship of a state.
- Q.16 Write a note on the welfare state model of development. Is it gaining popularity.
- Q.17 Read the passage given below carefully and answer he following questions :
"..... an upper house could perform the Useful function of being a revising body, an Its views may count but not its votes, those who could not enter into the rough and tumble of active politics could advise the lower house."
(i) Write the name of upper house and lower house.
(ii) "Its views may count but not its votes". What do you mean by this statement?
(iii) Why do we need the upper house?
- Q.18 "They say that to do injustice in, by nature, good. Suffer in justice, evil but that the evil is greater than the good. And so when men have both done and suffered injustice and have had experience of both, not being able to avoid the one and obtain the other, they think they had better agree among themselves to have neither: hence there arise laws and mutual covenants : and that which is ordained by law is termed by the lawful and just."
(i) Who is the writer of book. "The republic".
(ii) When is the law made?
(iii) Which his ordained by law is termed by the lawful and just? Why?
- Q.19 See the picture given and answer the following questions:
(a) The given picture is related to which right?
(b) At what age does a person get a right in India?
(c) Should all the people get this right in India? Why?



Q.20 Study the picture given below and answer the following questions:

- (a) Who is depicted here?
- (b) Name the fundamental right violated here?
- (c) Describe this right on the basis of Indian constitution.



Q.21 In the given political outline map of India, five States are marked as (A), (B), (C), (D) and (E). Identify them on the basis of the information given below.

- (a) State related Sajjan Singh case in 1965.
- (b) State related to most famous Hussaines Khatoon PIL.
- (c) State related to CNG buses and Autorickshaws case in 1995.
- (d) State related who have four state jurisdiction of High-Court.
- (e) State related to High Court Judge to impose impeachment.

Q.22 Distinguish between presidential, semi presidential and parliamentary type of executive.

OR

Describe the election and impeachment of Indian president.

Q.23 What changes have been made in panchayati Raj system under 73rd constitutional amendment?

OR

Describe the composition, function and features of working of urban local Government.

Q.24 How does Indian constitution blend rigidity with flexibility in the procedure of amendment?

OR

Describe the three procedures given under Article 368 for amending the Indian constitution?

Q.25 What is political theory? Discuss the nature and scope of political theory.

OR

What is politics? Why is it difficult to find one meaning of politics? What are the several dimensions of politics?

Q.26 Why Indian secularism is criticized?

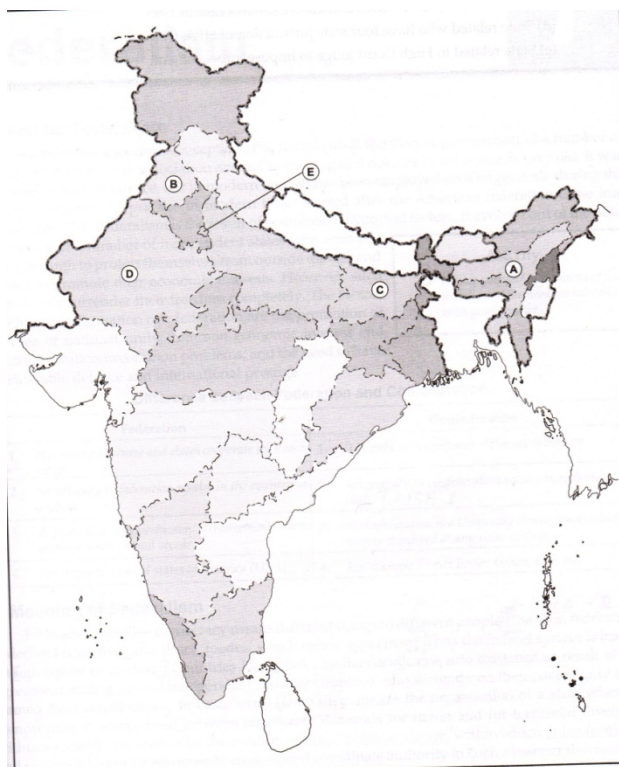
OR

What are the features which constitute a nation? How is a nation different from nationality?

Q.27 What is development? What are the main features of development?

OR

How does U.N. help in the promotion of world peace? Examine some of the methods used to promote peace.



Roll No. _____

Code. No. 11/Physical Education/NLCS/68
Annual Examination 2018 – 19

Time: 3:00 Hrs.

M. M. 70

Part – A

- | | | |
|------|---|---|
| Q.1 | Define Physical Education. | 1 |
| Q.2 | What is “Olympic Movement”? | 1 |
| Q.3 | What is the meaning of physical fitness? | 1 |
| Q.4 | What do you mean by special Olympic Bharat? | 1 |
| Q.5 | What do you mean by Shatkrmas or Yogic Kriyas? | 1 |
| Q.6 | What do you mean by vigorous physical Activities? | 1 |
| Q.7 | What is calculation formula of Waist Hip ratio? | 1 |
| Q.8 | Define Anatomx and Physiology. | 1 |
| Q.9 | What is meaning of kinesiology and Biomechanics? | 1 |
| Q.10 | Define psychology and sports psychology. | 1 |
| Q.11 | Define sports training. | 1 |
| Q.12 | What do you mean by I.OC. and WADA? | 1 |

Part - B

- | | | |
|------|--|---|
| Q.13 | Explain any Three carper options inphysical. | 3 |
| Q.14 | Write about it. (i) Ancient Olympic Games (ii) Modern Olympic Game (iii) Winter Olympic Games | 3 |
| Q.15 | Explain any Three components of physical fitness. | 3 |
| Q.16 | Explain many three objectives of Adaptive Physical Education. | 3 |
| Q.17 | Discuss about it : (i) Yama (ii) Niyama (iii) Paranyama | 3 |
| Q.18 | Explain any Three Techniques for behavior change. | 3 |
| Q.19 | Define Test, measurement and Evaluation. | 3 |
| Q.20 | Explain the classification of joints. | 3 |
| Q.21 | Write about it : (i) Lever (ii) Equilibrium (iii) Centripetal force | 3 |
| Q.22 | Explain the primary law of learning. | 3 |
| Q.23 | Explain the types of warming up in detail. | 3 |

Part - C

- | | | |
|------|---|---|
| Q.24 | Elucidate the importance of Anatomy and Physiology in the field of Physical Education and Sports. | 5 |
| Q.25 | What is biomechanics? Explain the importance of biomechanics in Physical Education and Sports. | 5 |
| Q.26 | Explain any five importance of psychology in sports. | 5 |
| Q.27 | Explain any five principles of Sports Training. | 5 |
| Q.28 | What do you mean by the term “Doping”? Discuss about classification of Doping. | 5 |

Roll No. _____

Code No. 11/Mathematics/NLCS/40

Annual Examination 2018 – 19

Time: 3:00 Hrs.

M. M. 100

General Instructions :

Question No. 1 to 4 carry One Mark each. Questions 5 to 12 carry Two marks each. Questions 13 to 23 carry Four marks each. Questions 24 to 29 carry Six marks each.

Section – A

- Q.1 What is the eccentricity of a rectangular hyperbola?
- Q.2 For what value of K, the coefficient of x^2 and x^3 will be equal in the expansion of $(3+kx)^9$.

OR

Expand $(1-2x)^5$.

- Q.3 Given $P(A) = \frac{3}{5}, P(B) = \frac{1}{5}$, find $P(A \text{ or } B)$ if A and B are mutually exclusive events.
- Q.4 Write the negation of the statement, “the number x is not a rational number”.

Section – B

Q.5 Evaluate : $\lim_{x \rightarrow 3} \frac{x^4 - 81}{2x^2 - 5x - 3}$.

Q.6 Find the value of $\tan \frac{\pi}{8}$. **OR** Find the value of $\sin \frac{31\pi}{3}$.

Q.7 Find the equation of the line through the point (0,2) making an angle of $\frac{2\pi}{3}$ with the positive x axis.

Q.8 Find the coefficient of x^6y^3 in the expansion of $(x+2y)^9$.

Q.9 Find the mean and variance of : 6,7,10,12,13,4,8,12.

Q.10 Find the equation of ellipse whose vertices $(\pm)5,0$ foci $(\pm 4,0)$.

OR

Find equation of circle with center $(-a,-b)$ and radius $\sqrt{a^2 - b^2}$.

Q.11 If the sum of n terms of an A.P is $3n^2+5n$ and its n^{th} term is 164. Find the value of n .

OR

Insert 6 numbers between 3 & 24 such that the resulting sequence is an A.P.

Q.12 Find the principle solution of equation $\sin x = \frac{\sqrt{3}}{2}$.

Section – C

Q.13 If ${}^n P_r = 336, {}^n C_r = 56$ find n and r and hence find ${}^{n-1} C_{r-1}$.

Q.14 Evaluate : $\lim_{x \rightarrow 0} \frac{\cos 2x - 1}{\cos x - 1}$.

Q.15 For the function $f(x) = \frac{x^{100}}{100} + \frac{x^{99}}{100} + \dots + \frac{x^2}{2} + x + 1$. Prove that $f'(1) = 100f'(0)$.

Q.16 Find the derivative of $\sin x$ by using 1st principle.

Q.17 Find the equation of a S set of point P such that $PA^2 + PB^2 = 2K^2$ where A and B are the points (3,4,5) & (-1,3-7) respectively.

Q.18 Find the coordinates of the foci and the vertices, the eccentricity the length of the latus rectum of the hyperbola $y^2 - 16x^2 = 16$.

Q.19 A person standing at the junction of two straight paths represented by the equation $2x - 3y + 4 = 0$ and $3x + 4y - 5 = 0$ wants to reach the path whose equation is $6x - 7y + 8 = 0$ in the least time. Find the equation of path that he should follow.

Q.20 The sum of n terms of two arithmetic progressions are in the ratio of (3n+8): (7n+15) find the ratio of their 12th terms.

OR

The sum of some terms of G.P. is 315 whose first term and common ratio are 5 and 2 respectively. Find the last term and number of terms.

Q.21 Find the square root of $-512i$.

OR

Express in the polar form of $1+i$.

Q.22 Prove that ${}^nC_r + {}^nC_{r-1} = {}^{n+1}C_r$.

OR

How many 6 digit number can be formed from the digit 0,1,3,5,7 and 9 which are divisible by 10 and no digit is repeated?

Q.23 Prove that $10^{2n-1} + 1$ is divisible by 11.

Section – D

Q.24 Find $(a+b)^4 - (a-b)^4$, hence evaluate $(\sqrt{3} + \sqrt{2})^4 - (\sqrt{3} - \sqrt{2})^4$.

Q.25 If the coefficient of a^{r-1} , a^r and a^{r+1} in the expansion of $(1+a)^n$ are in arithmetic progression, prove that : $n^2 - n(4r+1) + 4r^2 - 2 = 0$.

OR

If p^{th} , q^{th} and r^{th} term of a G.P. are a, b and c , respectively prove that $a^{q-r} \cdot b^{r-p} \cdot c^{p-q} = 1$.

Q.26 Find the image of the point (3,8) with respect to the line $x + 3y = 7$ assuming the line to be a parallel mirror.

Q.27 Prove $\sin 36^\circ \sin 72^\circ \sin 108^\circ \sin 144^\circ = \frac{5}{16}$.

OR

Prove $\cos^2 x + \cos^2(x + \frac{\pi}{3}) + \cos^2(x - \frac{\pi}{3}) = \frac{3}{2}$

Q.28 Solve the following system of inequalities : $5x + 4y \leq 40$, $x \geq 2$ and $y \geq 3$.

OR

Solve the following system of inequalities graphically $2x + y \geq 4$; $x + y \leq 3$; $2x - 3y \leq 6$.

Q.29 Find the mean, variance and standard deviation using short cut method :

| | | | | | | | | | |
|-----------------|-------|-------|-------|-------|-------|--------|---------|---------|---------|
| Height in cms. | 70-75 | 75-80 | 80-85 | 85-90 | 90-95 | 95-100 | 100-105 | 105-110 | 110-115 |
| No. of Children | 3 | 4 | 7 | 7 | 15 | 9 | 6 | 6 | 3 |

Roll No. _____

Code. No. 11/Economics/NLCS/70

Annual Examination 2018 – 19

Time: 3:00 Hrs.

M. M. 100

General Instructions :

- All Questions are compulsory.
- Marks are indicated against each Question.
- Answer should be brief and to the point.

Section – A

- Q.1 Define Positive Economics. 1
- Q.2 A firm is producing 20 units. At this level of output average total cost is Rs. 60 and Average Variable Cost is Rs. 37. Total fixed cost of the firm is: 1
- (a) 800 (b) 740 (c) 460 (d) 0
- Q.3 When TR increases at constant rate, then AR is: 1
- (a) Constant (b) Decreases (c) Increases (d) Zero
- Q.4 What happens to total product, when marginal product is zero? 1
- Q.5 The government has promoting foreign capital investment. What is its economic value in the context of production possibilities frontier? 3

OR

The government has launched 'Make in India' programme. How will it affect production possibilities frontier?

- Q.6 When the prices of a good rises from Rs. 10 to Rs. 15 per unit, its demand falls from 50 to 40 units. Calculate price elasticity of demand. 3
- Q.7 Explain the implication of 'freedom of entry and exit firms' under perfect competition. 4

OR

What is maximum price ceiling? Explain the implication of maximum 'Price Ceiling'?

- Q.8 Good X and Y are substitutes. Suppose price of good Y rises, what will be its effect on the quantity of good X. Give reason. 4
- Q.9 Differentiate between "Change in Quantity Supplied" and "Change in Supply" 4
- Q.10 Explain the condition of consumer equilibrium in case of two commodities using utility analysis. 6

OR

Explain properties of Indifference Curve.

- Q.11 Market for a good is in equilibrium. There is an 'increase' in demand for this good. Explain the chain effect of this change. Use diagram. 6
- Q.12 From the following information about a firm, find the firm's equilibrium output in terms of marginal cost and marginal revenue. Also calculate profit at this level of output. Give reasons for your answer. 6

| Output(Units) | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---------------------|----|----|----|----|----|----|----|
| Total Revenue (Rs.) | 10 | 20 | 30 | 40 | 50 | 60 | 70 |
| Total Cost (Rs.) | 13 | 22 | 30 | 37 | 47 | 57 | 71 |

Section-B Statistics for economics

- Q.13 Define bar diagram.? 1
- Q.14 The average of 10 items was 70. Later it was learnt that on item was read as 93 in place of 39. Find the correct mean. 1
- (a) 76.3 (b) 63.7 (c) 75.4 (d) 64.6
- Q.15 A graphical representation of frequency distribution is called a: 1
- (a) Time series graph (b) Frequency (c) Scatter diagram (d) Histogram
- Q.16 Ogive curves can determine: 1
- (a) Mode (b) Mean (c) Median (d) None of these
- Q.17 What is index number? Give example 3

OR

Calculate range and coefficient of range by suitable example

- Q.18 Calculate mean deviation (by mean) from the following data: 3

| | | | | | |
|---------|----|----|----|----|----|
| Sr. No. | 1 | 2 | 3 | 4 | 5 |
| Marks | 10 | 12 | 13 | 15 | 20 |

- Q.19 What is consumer price index? Explain its any two uses. 4
- Q.20 Calculate upper quartile and lower quartile from the following data: 4

| | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 320 | 450 | 400 | 550 | 530 | 580 | 600 | 610 | 700 | 780 | 800 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

- Q.21 Find the value of rank correlation form the following data: 4

| | | | | | | |
|---|----|----|----|----|----|----|
| X | 19 | 24 | 12 | 23 | 19 | 16 |
| Y | 9 | 22 | 20 | 14 | 22 | 18 |

OR

Explain the merits of statistical data presentation by diagrams. (Any four)

- Q.22 Calculate standard deviation and its coefficient from the following data: 6

| | | | | | | |
|----------------|------|-------|-------|-------|-------|-------|
| Class Interval | 0-10 | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 |
| Frequency | 12 | 18 | 27 | 20 | 17 | 6 |

- Q.23 Calculate the values of mean, median and mode from the following data: 6

| | | | | | | | | |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Marks | 00-10 | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 | 70-80 |
| No. of students | 5 | 8 | 30 | 45 | 35 | 20 | 6 | 3 |

- Q.24 What is Lorenz Curve? Explain the steps for constructing a Lorenz Curve. 6

OR

With the help suitable example draw a percentage bar diagram also write steps of construction.

PROJECT + ORAL →

20

Roll No. _____

Code No. 11/Accountancy/NLCS/70

Annual Examination 2018 – 19

Time: 3:00 Hrs.

M. M. 100

- Q.1 What is meant by Accounting Cycle ? 1
- Q.2 Which concept valued 'Closing Stock' at lower of Cost or Market Price. 1
- Q.3 Mr.Raj an electronic goods dealer, gifted a microwave of value 30,000 to his friend Rohan and recorded it in books as drawings. Is the treatment correct ? 1
- Q.4 Wages paid to a worker for making addition to machinery amounting to 5000 were debited to the wages account. Identify the type of error. 1
- Q.5 Explain days of grace. 1
- Q.6 'Cash Memo' is a source document or an Accounting Voucher? 1
- Q.7 Explain the following Accounting Assumptions : (a) Going Concern Assumption (b) Consistency Assumption (c) Accrual Assumption 3
- Q.8 Write any three advantages of Accounting 3
- Q.9 The Chief Accountant of Rana Motors has taken a decision that adjustments for outstanding expenses and prepaid expenses of the current year should not be made while preparing the financial statements. 3
- [1] Whether his decision is correct ?
- [2] Which accounting concepts are not being followed ? 3
- Q.10 Prepare 'Accounting Equation' from the following: 3
- (a) Started business with Cash Rs.1,00,000; Machinery 50,000
- (b) Purchased goods for cash Rs.20,000 and on credit Rs.30,000.
- (c) Sold goods for cash costing Rs.10,000 and on credit costing Rs.15,000 both at a profit of 20% on cost.
- Q.11 Following is the extract from a Trial Balance: 3
- Sundry Debtors 5,00,000; Bad Debts 5,000; PBD 10,000; Discount Allowed 9,000
- Create a provision for doubtful debts @ 10% on debtors and a provision for discount @ 2% on debtors. Show how the adjustment will appear in final accounts.
- Q.12 On 1st Jan. 2008 firm bought a machine for 90000 and spent 6000 on its installation and 4000 on its carriage. Estimated life of the machine 10 years & estimated scrap value of machine 20000. Find the amount of Depreciation and Rate of depreciation? 3
- Q.13 Prepare Trial Balance from the following information: 4
- Capital Rs.50,000; General Reserve Rs.5,000; Bank Loan Rs.15,000;
- Wages outstanding Rs.5,000; Computer Software Rs.10,000; Land and Building Rs.40,000; Bank overdraft Rs.3,000; Amount due from Mohan Rs.8,000; Inventory Rs.10,000; Cash in hand Rs.6,000; Preliminary Expenses Rs.4,000 lease hold property Rs.5000 bills payable Rs.10,000 provision for bad debts Rs.1000, book debts Rs.11,000, accrued commission Rs.2000.
- Q.14 Following transactions are of M/s. Vinod Kumar & Sons for the month of April, 2014. 4
- Prepare their Purchases Book: [GST @6% each]
- April 7 Purchased from M/s. Gaurav Sood & sons on Credit:
- 100 Zodiac Shirts @ 2,300 each
- 50 Reid & Taylors Trousers @ Rs.4,200 each
- Trade Discount @ 10%
- April 13 Purchased a Typewriter for office use from M/s. Bhagat Singh & Sons for Rs.4,000.
- April 27 Purchased on credit from M/s. Raj & sons:
- 10 dozen Peter England Shirts @ 1,800 each
- 50 Overcoats @ Rs.4,500 each
- Trade Discount @ 10%
- Q.15 Calculate due date for following Bills (additional information given below the question). 4
- | | Date of Bill | duration |
|-----|-----------------------------|----------|
| (a) | 28 th Dec., 2007 | 2 Months |
| (b) | 23 rd Nov., 2008 | 2 Months |
| (c) | 30 th July, 2010 | 60 days |

- (d) 12th June, 2010 60 days
 (e) 25th May 2017 4 Months {after sight} {date of acceptance 29 May]
 Emergency holiday – 1st Oct., 2010.
 Already declared public holiday- 14th August 2009. 4

Q.16 Calculate the value of opening stock from the following :
 Cash Sales 2,00,000 Sales Return (out of credit sales) 25,000
 Purchase Return 20,000 Closing stock 1,80,000
 Credit Sales 8,25,000 Purchases 6,20,000
 Carriage inwards 40,000 Rate of gross profit 25% on cost 4

Q.17 Pass the Journal entries for the following transactions : [SGST 6% and CGST 6%]
 [1] Purchased goods from Sanjiv worth 40,000 at term 10% Trades Discount and 5% Cash Discount . Half of the amount was paid at the time of purchase.
 [2] Withdrawn goods for personal use (cost 500 , Sales Price 700)
 [3] Paid rent 1500 to landlord. 1/3 of the premises is occupied by the proprietor for his own residence.
 [4] Sold good costing 6000 to M/s Kalu singh at an invoice price 10% above cost less 5% Trade discount. 4

Q.18 X are retailer ,has not maintained proper books of account but it has been possible to obtain the following details

| | Last Year | This Year |
|-----------------|-----------|-----------|
| Trace Creditors | 6,000 | 5,500 |
| Loan From Mohan | 5,000 | 5,000 |
| Stock | 12,500 | 13,500 |
| Cash in Hand | 1,000 | 1500 |
| Furniture | 8,000 | 8,000 |
| Debtors | 6,500 | 7,000 |
| Bank Balance | 4,000[Cr] | 5,000[Dr] |

Calculate the net profit for this year and draft the Statement of Affairs at the end of the year after noting that

- Proprietor has drawn Rs 500 per week for his personal use
- Furniture are to be depreciated by RS 1,000
- A provision of 5% is to be made against debtor.
- During the year he sold his Government Bonds of Rs 10,000 at 10% premium and brought that money in to the business. 6

Q.19 Draw up a reconciliation statement if favourable balance of pass book is Rs. 15,000:

- On 31st March 2002 Ramesh had issued cheques amounting to Rs. 8,000 of which cheques amounting to Rs. 3,200 have been presented for payment.
- A cheque of Rs.2,200 paid by him into bank of 26th March is not credited in the pass book.
- He had also received a cheque for Rs. 500 which although entered by him in the bank column of cash book, was omitted to be paid into the bank.
- On 30th March a cheque for Rs.1,570 received by him was paid into bank but the same was Omitted to be entered in cash book.
- There was a credit of Rs. 150 for interest in the pass book and a debit of Rs. 25 for bank Charges.
- The bank has credited by Rs. 1400 the proceeds of a bill. 6

Q.20 Enter the following transactions in a Cash Book with Cash and Bank columns: {CGST6% and SGST6% }

Jan 1 Cash in hand 8000 Bank overdraft 57000
 Jan 5 Received a cheque from Ram 32,500
 Jan 7 Deposited Ram's cheque into bank
 Jan 10 Paid to Mohan by cheque 24,250.
 Jan 15 Ram's cheque returned dishonoured
 Jan 20 Withdrew from bank for office use 2500

Jan 25 Cheque received from Hari 12000
 Jan 26 Hari's cheque was endorsed in favour of Mukesh
 Jan 29 Commission paid by cheque 1500
 Jan 31 Bank charge 250

Jan 31 Deposited into bank balance of cash in excess of Rs.1000.

6

Q.21 On 1st April 2010 X sold goods of value 10,000 [plus CGST 6% & SGST 6%] to Y. Y paid the amount of GST immediately in cash and drew a 3 Months Bill. Y accepted the Bill & return to X. X discounted the bill on 4 May, 2010 @ 6% per annum with his banker. On the due date bill was dishonoured & bank paid noting charged 50. Y paid 4,000 & noting charges in cash and accepted another bill for the balance with @ 10% per annum interest for two months. Y was declared insolvent on the due date of new bill & received 40% amount from him. Pass journal entries for the above transactions in the Books of X.

6

Q.22 Rectify the following errors

- i) The sales Account has been totaled short by 2000.
- ii) A sum of 8300 received from X was posted to his debit as 3800.
- iii) A purchase of goods from Ram amounting to 15000 has been wrongly passed through the sales book.
- iv) 5000 paid for furniture purchased has been charged to the ordinary purchases amount.
- v) Rs.9000 due from a customer were omitted to be taken to the schedule of sundry debtors.
- vi) Goods of the value of Rs 2920 returned by Mr. Raj were entered in the purchases book as Rs 520 and posted there from to his credit side.

6

Q.23 On 1st April 2010 following balances appeared in the books of Krishna Traders

Furniture Account 50,000
 Provision for Depreciation on Furniture 22,000

On 1st Oct. 2010 a part of furniture purchased for 20,000 on 1st July 2006 was sold for Rs 5,000. On the same date a new furniture costing 25,000 was purchased. The depreciation was provided @10% p.a. original cost of the assets . Prepare Furniture Account and Provision for Depreciation Account for the year ending 31st March 2011.

OR

Books of Mumbai Chemicals Ltd. Showed the following balances on 1st April 2012.

Machinery A/c 10,00,000
 Provision for Depreciation 4,05,000

On 1st April 2012 a machine which had a cost of Rs 2,00,000 on 1st Oct 2009 was sold for 80,000. On the same date a new machinery costing 3,00,000 was purchased. The firm writes off depreciation @10% p.a. under the Reducing Balance Method and its accounts are made up on 31st March each year. You are required to prepare the Machinery Account and Provision for Depreciation account for the year ending 31st March 2013.

Q.24 From the following figures extracted from the books of Govind, you are required to prepare a Trading and Profit and Loss Account for the year ended 31st March, 1998 and a Balance sheet as on that date after making the necessary adjustments:

8

| Particulars | Rs. | Particulars | Rs. |
|------------------------|----------|---------------------|--------|
| Input CGST | 5250 | Output SGST | 2500 |
| Input SGST | 5250 | Output CGST | 2500 |
| Shri Govind's capital | 2,28,800 | Stock 1.4.97 | 38,500 |
| Shri Govind's drawings | 13,200 | Wages | 35,200 |
| Plant & Machinery | 99,000 | Sundry Creditors | 44,000 |
| Freehold property | 66,000 | Postage & Telegrams | 1,540 |
| Purchases | 1,10,000 | Insurance | 1,760 |
| Returns Outwards | 1,100 | Gas and fuel | 2,970 |
| Salaries | 13,200 | Bad debts | 660 |

| | | | |
|--|----------|---------------------------------|-------|
| Outstanding Office Exp. | 2,750 | Office Rent | 2,860 |
| Office furniture | 5,500 | Freight | 9,900 |
| Discounts A/c (Dr.) | 1,320 | Loose tools | 2,200 |
| Sundry Debtors | 29,260 | Factory Lighting | 1,100 |
| Loan to shri Krishna @ 10% p.a. balance on 1.4.97 | 44,000 | Provision for Doubtful Debts | 880 |
| Cash at bank | 29,260 | Interest on loan to Shri kishna | 1,100 |
| Bills Payable | 5,500 | Cash in hand | 2,640 |
| Sales | 2,31,440 | | |

1-Stock on 31st March, 1998 was valued at Rs. 72,600.

2-Depreciate Plant and Machinery by 20% furniture by 10% and Freehold property by 5%.

3- Write off . 3,000 bad debts and maintain a provision for doubtful debts at 5% on sundry debtors

4-Salary due but not paid RS 4800 and Factory Lighting paid in advance 100

5- Goods destroyed by fire Rs 8900 and claim accepted by the insurance company Rs 7000 [GST 6% each]

6- The manager is entitled to a commission of 10% of the net profits after charging such commission.

OR

From the following particulars for the year ending 31st March, 2002 of M/s ABC Company, prepare Trading and Profit and Loss Account and Balance Sheet on that date:

| | | | |
|------------------------|----------|------------------------------|----------|
| Stock . 1.4.2001 | 23,200 | Advertisement | 15,950 |
| Capital 1.4.2001 | 2,45,000 | Apprenticeship premium | 3,480 |
| Purchases | 58,000 | B/R | 10,150 |
| Sales | 2,32,000 | B/P | 7,250 |
| Office Expenses | 23,345 | Sundry Debtors | 58,000 |
| Return Inward | 4,350 | Plant and Machinery | 13,050 |
| Interest on Loan | 870 | Sundry Creditors | 45,820 |
| Return Outward | 1,160 | Loan (Dr.) @ 10% on 1.4.2001 | 1,45,000 |
| Drawings | 8,700 | Investment | 8,700 |
| Wages | 20,010 | Cash at bank | 10,150 |
| Land and Building | 1,59,500 | Cash in hand | 725 |
| Furniture and Fixtures | 7,250 | Investment | 20,300 |
| Loan from bank | 53740 | Input CGST | 3600 |
| Input SGST | 3600 | Output CGST | 3000 |
| Output SGST | 3000 | | |

Adjustment:

1- Stock on 31st March, 2002 was valued at Rs 80,000

2- Interest on Capital to be allowed 5% for the year.

3- Apprenticeship Premium is for three years received in advance on 1st April, 2001

4- Fire Insurance is prepaid of Rs 1,000; Outstanding Wages 490; and accrued commission is 1,000

5- Out of Advertisement Expenses are to be carried forward.

6- The Manager is entitled to a commission of 10% at the Net Profit calculated after charging such commission.

ORAL + PROJECT →

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Annual Examination 2018 – 19**Time: 3:00 Hrs.****M. M. 70**

- Q1. [a] Explain expression and statement in python with example. 2
 [b] Give the output produced by following statements: 2
 (i) (17%5) (ii) (17%5.0) (iii) (17%5) is (17%5)
 (iv) (17%5.0)==(17%5.0)
- Q.2 [a] Draw a flowchart to determine if the first number is divisible by second number or not? 2
 [b] Find syntax error(s) if any, in the following program: 2
 MAX='4'
 a=int(input("enter the value of a:"))
 b=int(input("enter the value of b:"))
 if(a>b)
 MAX=5
 for x in range(0,MAX):
 print(x)
- [c] Write a program to print the sum of following sequence : $s = 1 + x^2 + x^3 + x^4 + \dots + x^n$ 2
- Q.3 [a] How is capitalize () function different from upper() function? 1
 [b] Write a program to count number of 'p' in the string "pineapple" 1
 [c] Find the output of following codes: 2
 str="group discussion"
 Print(str.lstrip("gro"))
 Print(str.lstrip("org"))
 Print(str.rstrip("nco"))
 Print(str.rstrip("uss"))
- Q.4 [a] Give the output of the following statement 2
 L1= [1,10,20,4,70,100,90]
 L2=["delhi " "chennai" "mumbai"]
 A=L1+L2
 Print (a)
 B=L1.pop(1)
 Print(b)
 L1.insert (-2,46)
 Print(L1)
- [b] Write a program to input a list of integer from user and check if the number of odd integer are more than number of even integer . 2
- Q.5 [a] Describe packing and unpacking of tuples with example. 1
 [b] Predict the output 2
 X=(1,(2,(3(4))))
 print (len(x))
 print(x(1)(0))
 print(2 in x)
 Y=(1,(2,(3,),4),5)
 print(len (y))
 print(len(y[1]))
 print(len (y[2]=50))
 Z=(2,(1,(2,)1,1)
 print(z[z[0]])
- [c] Write a program to create a tuple using for loop : 2
 the tuple('a', 'bb', 'ccc', 'dddd'. . .) that ends with 26 copies of z.

- Q.6 [a] Give any four characteristics of a dictionary. 2
 [b] Write a program that repeatedly asks user to enter product names and prices. Store all of these in a dictionary whose keys are the product names and values are prices. Now, ask user to enter a product name and print the corresponding price or a message if the product is not in the dictionary. 3
- Q.7 Convert the following: 3
 (i) $(EB4A)_{16}$ to $(?)_8$
 (ii) $(11011101.0111)_2$ to $(?)_{10}$
 (iii) $(25.25)_{10}$ to $(?)_2$
- Q.8 Draw a state transition diagram for issuing a book from library. 2
- Q.9 Differentiate between bubble sort and insertion sort. Write a program to sort a given list of integers using any one sorting technique. 3
- Q.10 What is an exception? How can you handle an exception in python? 2
- Q.11 [a] What do you understand by union and Cartesian product Operations in relational algebra? Give example. 2
 [b] Observe the following table and find the degree and cardinality of the table: 2

| Fno | FlightDetail | Price |
|-----|--------------|-------|
| 101 | DEL-KOL | 2300 |
| 104 | KOL-DEL | 2400 |
| 205 | DEL-MUM | 3500 |
| 109 | MUM-AMD | 2200 |
| 103 | CHE-KOL | 4100 |

[c] Consider the following tables and write SQL queries for (i) to (iv) and find outputs for (v) to (viii) 6

Table:SPORTS

| SCODE | SNAME | FEE |
|-------|--------------|------|
| S01 | Badminton | 1500 |
| S02 | Table tennis | 2500 |
| S03 | Bowling | 7500 |

Table:MEMBER

| MNO | NAME | DOE | DOB | GENDER | SCODE |
|-----|----------|------------|------------|--------|-------|
| 501 | Girish | 2015-02-01 | 1992-02-11 | Male | S01 |
| 202 | Kriti | 2010-11-10 | 1991-09-25 | Female | S03 |
| 903 | Paritosh | 2015-06-01 | 1981-10-14 | Male | S02 |
| 107 | Ravleen | 2009-01-17 | 1981-12-09 | Female | S03 |
| 304 | Manila | 2011-12-19 | 1996-10-12 | Female | S01 |
| 305 | Sahaj | 2011-12-28 | 1979-04-11 | Male | S02 |

- (i) To display MNO, Name, DOE from table MEMBER in descending order of DOE.
- (ii) To display the name of all the female members from the table MEMBER.
- (iii) To display the MNO, Name and DOB of those members from the table MEMBER who are born between the dates '1984-01-01' and '1990-04-31'.
- (iv) To display count of FEMALE members, who have enrolled after '2010-01-31'.
- (v) SELECT MAX(FEE), MIN(FEE) FROM SPORTS;
- (vi) SELECT SCODE, COUNT(*) FROM MEMBER GROUP BY SCODE HAVING COUNT(*) > 1;
- (vii) SELECT NAME, SNAME, FEE FROM MEMBER M, SPORTS S WHERE M.SCODE=S.SCODE AND MNO < 501;
- (viii) SELECT MIN(DOB), MAX(DOB) FROM MEMBER;

Q.12 [a] Prove algebraically: 1

$$X'Y+Z=(X'+Y'+Z)(X'+Y+Z)(X+Y+Z)$$

[b] Name the law and verify using truth table: 1

$$A+B.C=(A+B)(A+C)$$

[c] Draw the logic circuit for (a'b'cd+abc'd+a'b'cd) using NAND gate only 2

Q.13 [a] What is the role of CPU of a mobile system? 1

[b] Write short note on : (i) Language processor (ii) Utilities 2

Q.14 [a] Define and explain NoSQL and explain its types. 2

[b] Given a database organization and a collection teacher with following documents, answer the questions below: 3

| TNO | TNAME | TADDRESS | SALARY | DEPT_NO | DOJ |
|-----|-----------|---------------------|--------|---------|------------|
| T02 | J Mittal | 34, Ramesh nagar | 22000 | D02 | 1999-07-03 |
| T03 | S Kaur | D-31, Ashok vihar | 21000 | D01 | 2000-06-06 |
| T04 | S Kaushik | MG-32, S Bagh | 15000 | D03 | 2001-08-08 |
| T05 | Sangeeta | G-35, Malviya Nagar | 18900 | D05 | 2000-02-20 |
| T06 | Ramesh | B-42, shalimar | 24000 | D03 | 1997-07-03 |

- (i) List all the documents from teacher collection.
- (ii) Update the teacher collection for the teacher no T07 with DEPT_NO as "D02".
- (iii) Remove a document from teacher collection whose teacher no. is "T07".

Q.15 [a] Differentiate between phishing and pharming. 2

[b] Write short note on : 3

- (i) Cyber trolling
- (ii) Cyber bullying
- (iii) Hacking

Q.16 [a] Name two threats to security in network. What is the role of firewall in network security. 2

[b] Differentiate between virus and worms and trojan horse. 3

Roll No. _____ Code. No. 11/Fine Arts/NLCS/10
Annual Examination 2018 – 19

Time: 1:30 Hrs. M. M. 40

Q.1 Explain the compositional aspect of the rock painting “wizard’s dance” of Bhimbetka. 5

Q.2 Describe the historical as well as artistic aspects of the idol “Dancing Girl”. 5

OR

Is the mother goddess and idol? Explain it with justification.

Q.3 Explain the differences between Mathura Buddha and Sarnath Buddha. 5

OR

Yakshini of Didarganj is a masterpiece. Do you agree? Justify your views.

Q.4 What is Mara Vijay? Describe the compositional arrangement of this relief. 5

OR

Describe the painting “Padmapani Bodhisattva”.

Q.5 Explain the sculpture “Mother and Child”. 5

OR

Explain the following (Any Two) :

- (i) Ravana Shaking Mount Kailash.
- (ii) The Trimurti, Elephanta, Maharashtra
- (iii) Laxmi Narayana, Kandariya Mahadeva temple Khajuraho

(iv) Cymbal players, Sun temple, Konark.

Q.6 Explain the theme of the sculpture Nataraja. 5

OR

What are the characteristics of the bronze sculpture “Devi Uma”?

Q.7 What are the characteristics of Mughal architecture? 5

Q.8 Explain the compositional arrangement of the Taj Mahal. 5

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