Roll. No. | | **Code No.** 11/English/NLCS/102

Quarterly Examination 2016 – 17

Time: 3:00 Hrs. **M. M. 100**

General Instruction :-

SECTION – A	READING	20
SECTION – B	WRITING & GRAMMAR	30
SECTION – C	LITERATURE & LONG READING	30
SECITON – D	LISTENING SKILL & SPEAKING SKILL	20

SECTION –A (READING)

Q1. Read the passage given below and answer the following questions:

FUTURE OF GLOBAL FINANCE

Savings, investments and other financial products are essential for long-term economic growth and development. Whether running a household or a corporation, people need access to reliable, affordable financial services and these are what the global financial system should provide. The global financial crisis shook both the financial system and the public's confidence in it. In its wake, there has been closer scrutiny of the financial system and debate over the role regulation has to play and how extensive it should be. It is a debate that will help shape the future of the financial system along with other significant challenges such as enabling more inclusive growth and the effect technology is having on the way financial services can be delivered and used.

The global financial crisis revealed significant weaknesses in the financial system and some of the vulnerabilities that can result from having such an interconnected global market. Several years after the crisis, the world economy is still struggling with slow growth, unconventional monetary policy in major economies, and constrained government budgets. It is vital that we find ways of making the financial system more resilient and able to withstand shocks in the market. The crisis also caused a significant drop in levels of public trust and confidence in financial institutions. To function efficiently, the system needs to re-establish that trust.

As well as restoring public trust and improving resilience, there is an urgent need to allow more people to access the financial system. Amid increasing concerns about rising income inequality and its negative economic and social impact, there is no bigger policy challenge preoccupying political leaders than expanding social participation in the process and benefits of economic growth. Providing access to credit and savings is a major challenge in the battle against global poverty—yet two billion people do not have access to high-quality, affordable financial services.

Additionally, there are 200 million small and medium-sized enterprises worldwide that have no access to formal financial services. While there is demand for financial services at all levels of income, many at the lower end of the income bracket are not able to access formal services and instead have to turn to riskier methods which are also more expensive. The gap is also being filled with companies who use technology to decrease cost and measure risk in new and innovative ways. These companies have created an entire new industry, often referred to as "fintech" (a contraction of "finance" and "technology"), defined as the use of technology and innovative business models in financial services.

A.1.1 A Choose the correct options: $1 \times 6 = \mathbf{6}$

(a) What shook both the financial system and the public's confidence in it.:

(i) Global Financial Crisis (ii) Savings (iii) growth (iv) vulnerabilities

(b) What global financial crisis revealed:

(i) public's confidence (ii) significant weaknesses in the financial system

(iii) financial system (iv) role regulation

(c) What often referred to as “fintech” ;
(i) Financial and technical (ii) Finance and techniques
(iii) Finance and technology (iv) None of them

(d) The system needs to re-establish that trust to:
(i) function efficiently (ii) reliable, affordable financial services
(iii) allow more people to access (iv) credit and savings

(e) What is a major challenge in the battle against global poverty:
(i) Savings and investments (ii) Providing access to credit and savings
(iii) significant weaknesses (iv) medium-sized enterprises

(f) In para 4, a word that means the same as ‘experimental’:
(i) access (ii) defined (iii) innovative (iv) methods

A.1.2 Answer the following questions: $1 \times 6 = \mathbf{6}$

(a) What are essential for long-term economic growth and development?
(b) What the global financial system should provide?
(c) Who have no access to formal financial services?
(d) How many people do not have access to high-quality, affordable financial services?
(e) What will help to shape the future of the financial system along with other significant challenges?
(f) What is the condition of world economy after several years after the crisis?

Q.2 Read the passage given below and answer the following questions:

The Siberian tiger, a subspecies of tiger, is the largest cat in the world. It averages about 3.3 m in length, with a tail measuring 1 m. Adult male Siberian tigers can weigh up to 320 kg, while females are significantly smaller, weighing up to 180 kg.

Siberian tigers are distinguishable by their striped fur. Similar to people’s unique fingerprints, no two tigers have the same striped pattern. Siberian tigers differ from other tigers because they have fewer, paler stripes, and they also have manes. The mane, in addition to their thick fur, helps keep them warm.

Also known as the Amur tiger, the Siberian tiger resides in a small region in the southeast region Russia. They are also located in small numbers in China and North Korea.

Siberian tigers are solitary animals, marking their scent on trees to keep other tigers away. They roam many miles and hunt often. They stalk their prey, which include elk, boar, bears, and deer, until they are close enough to pounce. When successful, they drag their kill to a secluded area before devouring the meat. Tigers also hunt smaller animals like rabbits, picas’, and fish.

Because tigers are not always successful on their hunts, they need to hunt often. They can eat up to 27 kg if they are very hungry, but generally they eat about 9 kg of meat in one sitting.

The gestation period in Siberian tigers are 3-3.5 months. Female tigers give birth once every two years at any point during the year.

A litter consists of two to six cubs. The mother tiger will care for the cubs by herself, at times, leaving the babies alone while she hunts. Often she cannot catch enough food for the cubs, and some will die.

At 3 months, the babies will be able to leave the den; they may even go on hunts with their mother. At 18 months old, they are able to hunt on their own, but will not leave their mother's den. When they reach 2-3 years old, they will leave the den and begin life on their own.

Siberian tigers are considered endangered by IUCN's Red List. One cause of their dwindling population is loss of habitat due to deforestation. In addition, Siberian tigers are poached, or illegally hunted, for their fur and for body parts that are used for traditional medicines.

Efforts have been made to curb poaching of tigers and to protect tiger habitats. Many countries, including the United States, have created laws that outlaw the importation and selling of tiger parts. There are also breeding programs to help sustain the tiger population. The Siberian tiger resides in a small region in the southeast region Russia. They are also located in small numbers in China and North Korea.

A.2.1 On the basis of your reading of the above passage make notes on it using heading and sub-heading. Use recognizable abbreviations, wherever necessary. **5**

A.2.2 Write a summary of the above passage based on your notes. **3**

SECTION –B (WRITING & GRAMMAR)

Q.3 You found a costly mobile without sim card in it. Write a suitable advertisement for the 'Lost and Found' column inviting its real owner hiding its details.

OR

Design a poster for your School Fete. You may use slogans. **4**

Q.4 Write a factual description in 120 – 150 words about 'A Street Quarrel'.

OR

You are Purnima /Pavan , living at 3244, Sarita Colony, Mumbai-32. Your friend Sunitha / Sanjeev has gone to Chennai due to the transfer of her/ his father. Recollecting the sweet memories of old times, write a letter in about 120-150 words inviting her /him to stay with you during the vacation. Also mention the program you have planned according to her/his liking. **6**

Q.5 You are Venugopal living at 204, Thamaiya Road, Mokkupada (CHENNAI). You saw the following advertisement in 'The Times of India'. Write a letter applying for the job. Enclose a bio-data also. **10**

Wanted experienced Accounts Assistant
at least B. Com. With computer knowledge,
handsome salary.
Director Wrangler & Wrangler Co.
205, Thomas Road, Chennai.
Last Date for Application 25 Dec. 2106

Q.6 Read the following passage and write the missing word along with the word that comes before and the word that comes after it. Write the answers in your answer sheet against the correct blank number. ½×8=**4**

Celebrities don't have privacy that an ordinary person. The most personal details of their lives splashed on the front pages leading dailies. Media follows them wherever go. When try to things that normal people do, like eating out or watching football game, they run the risk of being interrupted thoughtless autograph hounds aggressive fans.

	e.g.	have	the	privacy;
(a)	____	___	_____	
(b)	____	___	_____	
(c)	____	___	_____	
(d)	____	___	_____	
(e)	____	___	_____	
(f)	____	___	_____	
(g)	____	___	_____	
(h)	____	___	_____	

Q.7 Fill in the correct form of verbs given in the brackets: ½ × 8 = **4**

Yesterday Savita (a) _____ (come) to my house to give me the happy news of her standing first in the Board Examination. I (b) _____(be) overjoyed to know this. We (c) _____ (share) our views regarding the latest trend in paper setting. She also (d) _____ (tell) me that she (e) _____ (attend) all the classes regularly. She never (f) _____ (miss) any class. This habit (g) _____ (help) her a lot. Now she (h) _____ (decide) to go to U.K. for further studies.

Q.8 Rearrange the words to make a meaningful sentences:- 1 × 2 = **2**

(a) rises in the/ Western Himalayas/ and flows/ the river/ into Bangladesh. .

(b) is the most /river basin /heavily polluted/ in the world /the Ganges basin.

SECTION –C (LITERATURE & LONG READING)

Q.9 Read the extract and answer the questions: 1 × 3 = **3**

Some twenty-thirty-years later
She'd laugh at the snapshot. "See Betty
And Dolly," she'd say , "and look how they
Dressed us for the beach."

(a) Who are Betty and Dolly?

(b) Who does 'she' refer to in line 2?

(c) Why would 'she' laugh at the snapshot?

Q.10 Answer any three of the questions given below: 3 × 3 = **9**

(a) What type of man was Uncle Khosrove?

(b) Why did the medical certificate prove to be useless?

(c) What is the theme of the story 'The Address'?

(d) What did Sue mention in the card she presented to her parents?

Q.11 Answer the following question in 120 – 150 words: - 1 × 6 = **6**

(a) Describe the instances to prove that the narrator plays the role of a matchmaker.

OR

(b) 'Grandmother was happier in village than in the city.' Comment.

Q.12 Write short notes on the Otis family members. 1 × 6 =**6**

OR

Explain about the first meeting of Mr. Otis with the Canterville Ghost.

Q.13 After an encounter with the twins, the ghost was depressed. Explain by giving reasons.

OR

Explain the event of the second appearance of the ghost in the Canterville Chase. 1 × 6 = **6**

SECTION –D (LISTENING SKILLS & SPEAKING SKILLS) 20

**** ALL THE BEST ****

Roll. No. | **Code No.** 11/B. St. /NLCS/72

Quarterly Examination 2016 – 17

Time: 3:00 Hrs. **M. M. 100**

General Instruction :-

This Question paper consists of 27 Questions.

- Question No. 1 to 8 carry **One Mark** each. Answer should be in One Word OR One Sentence.
- Question No. 9 to 14 carry **Three Marks** each. Answer should be in about 50-75 words.
- Question No. 15 to 19 carry **Four Marks** each. Answer should be in about 75-100 words.
- Question No. 20 to 23 carry **Five Marks** each. Answer should be in about 75-100 words.
- Question No. 24 to 27 carry **Six Marks** each. Answer should be in about 200 words.

Q.1	What is "Plant layout"?	1
Q.2	Explain "Profession"?	1
Q.3	What is "Minimum subscription"?	1
Q.4	Which document is called as charter of the company?	1
Q.5	Define "Statutory Corporation"?	1
Q.6	Explain "Disinvestment".	1
Q.7	What is "EFT"?	1
Q.8	Explain "Principle of Indemnity".	1
Q.9	What is meant by "Point of sale" (POS)?	3
Q.10	State any three situations where in government company is the most suitable form of Public Sector organization.	3
Q.11	"MNC's are a mixed blessing to the developing countries". In the light of this statement explain the return of MNC?	3
Q.12	Explain "MOU"?	3
Q.13	What is meant by a "Statutory Declaration" with example?	3
Q.14	Business involves" Only sale and exchange of good for profit". Do you agree with this?	3
Q.15	Compare business with profession and employment?	4
Q.16	"Minor partner does not contribute any capital". Do you agree? Give reason in support of your Answer.	4
Q.17	Name the documents to be submitted during the incorporation stage.	4
Q.18	Explain difference between private and public sectors.	4
Q.19	Why is life insurance considered as a contract of assurance?	4
Q.20	Explain the difference between life, fire and marine insurance?	4
Q.21	Can the public sector companies compete with the private sector in terms of profits and efficiency? Give reason for your Answer?	1+4=5
Q.22	Explain followings : (i) Marketing cooperative society (ii) Credit cooperative society	2½+2½=5
Q.23	"Traders Act as link between the producer and consumer" Do you agree. Give reasons.	2½+2½=5
Q.24	Explain the various types of Industries?	6
Q.25	Explain the processer of formation of company?	1½×4=6
Q.26	Explain the "Govt. Policy towards the public sector since 1991".	1½×4=6
Q.27	A husband took the life Insurance policy of his wife. After one year the couple got divorced and later on after two years the wife died. Will the husband get compensation from the insurance company?	6
	ORAL + PROJECT →	**10**

**ALL THE BEST **

Roll. No. **Code No.** 11/Physical Education /NLCS/57

Quarterly Examination 2016 – 17

Time: 3:00 Hrs. **M. M. 70**

Part - A

Q.1	What is the meaning of physical fitness?	**1**
Q.2	Define Physical Education.	**1**
Q.3	What do you mean by 'Ancient Olympic Games'?	**1**
Q.4	Define 'Yoga'.	**1**
Q.5	What do you mean by Doping?	**1**
Q.6	What is 'test'?	**1**
Q.7	What is meaning of measurement?	**1**
Q.8	What is 'W.A.D.A.'?	**1**
Q.9	Write parts of pranayama.	**1**
Q.10	What do you understand about I.O.A. and I.O.C.?	**1**
Q.11	What do you mean by Indicators of health? Mention their types.	**2**
Q.12	What are the Olympic Motto?	**2**
Q.13	Write Yoga as an Indian Heritage.	**2**
Q.14	Write the types of Doping.	**2**
Q.15	What is 'B.M.I.' ? What is the formula of calculation of B.M.I.?	**2**
Q.16	What are Importance of healthy positive life style?	**3**
Q.17	Write about modern Olympic Games.	**3**
Q.18	What are schemes of Sports Authority of India?	**3**
Q.19	Discuss about prevention and management of diabetes.	**3**
Q.20	What are performance Enhancing substance?	**3**
Q.21	What are factors affecting physical fitness and wellness?	**5**
Q.22	Describe about various types of Awards.	**5**
Q.23	Enlist the career options in Physical Education.	**5**
Q.24	Write the Elements of Yoga.	**5**
Q.25	Write short notes on the following :	**5**
	(i) In and out of competitions for testing for doping control.	
	(ii) Responsibilities of Athletes for doping control.	
Q.26	What are Importance of Test and Measurement in Sports?	**5**
Q.27	What are Aims and Objectives of Physical Education?	**5**

**ALL THE BEST **

Roll. No _____ **Code No.** 11/Computer Science /NLCS/38

Quarterly Examination 2016 – 17

Time: 3:00 Hrs. **M. M. 70**

Q.1 Number system conversion :- ½ ×12=**6**

(i) $(113)_{10}$= (?)$_2$= (?)$_8$= (?)$_{16}$

(ii) $(773)_8$= (?)$_{10}$= (?)$_2$= (?)$_{16}$

(iii) $(11010111)_2$= (?)$_{10}$= (?)$_8$= (?)$_{16}$

(iv) $(F1F)_{16}$= (?)$_{10}$= (?)$_2$= (?)$_8$

Q.2 Solve the following :- ½×8=4

(i) $(11011)_2 - (101)_2$ [with 1's and 2's complement method]

(ii) $(317)_8 - (126)_8$

(iii) $(777)_8 + (317)_8$

(iv) $(FA)_{16} + (1\ F)_{16}$

(v) $(1\ AF)_{16} - (FF)_{16}$

(vi) $(176)_8 + (477)_8$

(vii) $(110111)_2 + (110111)_2$

Q.3 Give the name of the technologies used in first to fifth generation of computers. ½×5= 2½

Q.4 Draw the chart representing types computer. 2½

Q.5 What is operating system? Explain any two types of OS. 1+2+2=5

Q.6 Give differences :- 1×4=4

(i) Compilers V/S Interpreters (ii) File V/S Directory

(iii) RAM V/S CD (iv) Impact Printer V/S Non impact printer

Q.7 Explain briefly :- 1+1+3+3=8

(i) Procedural and non procedural programming (ii) Keywords

(iii) Identifiers (iv) Logical operators

Q.8 Write Programs for the followings :- 5

(i) Take name, Fname, Marks in all five subjects from the user and prepare the mark sheet and output should be like ……

New Look Central School, Bhilwara		
Name : Ankit Jain		Class : XI Comm.
F_Name : XYZ Jain		Date : 15 / 9 / 16
Sub Name	Max Marks	Marks obtained
English	100	90
Maths / comp / Physical Ed.	100	80
Business Studies	100	70
Economics	100	85
Accounts	100	99
	Total 500	Total 424
	Percentage	Calculate and ---Print .

(ii) To print name of the week day as per the number given by the user from 1-7. (Use switch statements) 2

(iii) To calculate simple interest as per user's input for principle amount, Rate of interest and time. 2

(iv) To convert meters in to kms. 1

(v) To print lowest number out of three nos (use conditional operators). 2

(vi) To check whether a given no is positive, negative or zero. 2

(vii) To print whether a given character upper case or a lower case character or a digit or any other character. Use ASCII code for it. The ASCII codes are as given below :- 3

Characters	ASCII Code Range
'O' – '9'	48 – 57
'A' – 'Z'	65 – 90
'a' – 'z'	97 – 112
Other characters	0 – 255 excluding the above mentioned codes.

(viii) To print following series :-

(a) 1,2,3,4…… 1

(b) 1,4,9,16….. 1

(c) 2,4,6,10,16,26 ….. 1

(d) 0,1,1,2,3,5,8…. 2

(ix) 2

```
        *
    *   *
*   *   *
```

(x) 2

```
1   2   3
1   2
1
```

Q.9 Write outputs for the following C++ codes :-

(i) 1

```
        int num = 3;
        Switch (num)
{       case 1 :
        case 2 :
        case 3 : cout << "was 1 to 3 \n";
        case 4 : cout << "was 4 \n";
        default : cout <<"unknown";
}       cout << ".";
```

(ii) 1

```
int     x = 0 ;
If (x = 1)
cout << "was equal";
else
cout << "not equal";
cout << "****";
```

(iii) 1

```
int     i=J=10;
If (a<100)
If (b>50)
++i;
else
++J;
cout <<"J=" << i << "\n";
cout <<J="<<J<<"\n"
if the input is a =30, b=30
```

(iv) 1

```
For (i=0; i<20; i++);
J=i;
cout <<J-5;
for ( - - J;J>10;J--)
cout << J;
```

(v) While (0) 1
cout << “new”;
cout << “old”;

Q.10 Rewrite following codes after remaining all errors:-

(i) 1
```
include [iostream]
void main ( )
{   int R; W=9;
    While ; W>60
{   R=W – 50;
    switch (W)
{   20 : cout << “Lower Range :<<endl;
    30 : cout << “Middle Range “<<endl;
    20 : cout << Higher Range “<<endl;
}
    }
        }
```

(ii) While (i<10); 1
[cout<< ‘I am in bhilwara’;
cin << i
cout < ‘You are my friend;
cout Aren’t your……..

(iii) For (i>0;i++) 1
for (; ;)
cout << “INDIA”;
getch( );

(iv) i=2 1
if (i>1);
cout << “Two is less than i”;
cout<< “Three four five
i=+9
i=7 – J

Q.11 (i) Why header files are important to be included in a program. 1

(ii) What is main ( ) function. How many main ( ) functions can we have in our program? Justify answer.

1½ + ½=3

*** ALL THE BEST **

Roll. No. **Code No.** 11/Economics/NLCS/72

Quarterly Examination 2016 – 17

Time: 3:00 Hrs. **M. M. 100**

General instructions:

1. All questions in both the sections are compulsory. Marks for questions are indicated against each.
2. Questions 1 -6 and 17-22 are very short answer questions carrying **1 mark**. They are to be answered in one sentence each.
3. Questions 7-11 and 23-27 are short answer questions carrying **3 marks** each. Answers to them should not normally exceed 60 words each.
4. Questions 12-14 and 28-30 are also short answer questions of **4 marks** each. Answers to them should not normally exceed 70 words each.
5. Questions 15- 16 and 31-32 are long answer questions of **6 marks** each. Answers to them should not normally exceed 100 words each.

SECTION – A (STATISTICS)

Q.1 The aggregate of data is called Statistics. Which method is used for the estimation of population in a country? 1

Q.2 Define sampling errors. 1

Q.3 A open end series that series in which – 1

(a) Lower limit of the first class interval is missing
(b) Upper limit of the last class interval is missing
(c) Both (a) and (b)
(d) None of these

Q.4 Table is the consequence of - 1

(a) Classification (b) organization (c) presentation (d) tabulation

Q.5 What is the shape of "less than Ogive"? 1

(a) Rising upward (b) falling downward (c) Parallel to x axis (d) parallel to y axis

Q.6 Scarcity causes economic problem. How? 1

Q.7 Make format of table presenting all its parts. 3

Q.8 Find median of the following values. 30, 20, 17, 13, 21, 23, 35, 24, 11. 3

Q.9 Explain Alfred Marshall's definition for Economics. 3

Q.10 State the main features of statistics . 4

Q.11 Make multiple bar diagram of the following data : 4

Faculty	No. of Students		
	2011-12	**2012-13**	**2013-14**
Arts	600	550	500
Science	400	500	600
Commerce	200	250	300

Q.12 Find out mode from the following data : 4

Class interval	5-10	10-15	15-20	20-25	25-30	30-35	35-40
No. of Children	4	5	3	2	6	7	3

Q.13 What are the advantage and disadvantage of collecting primary data by (i) personal interview and (ii) mailing questionnaires to respondents? 4

Q.14 What is meant by census? Write short note and facts of census 2011. 4

OR

Calculate weighted mean of the following data by using direct and short cut methods :

Items	81	76	74	58	70	73
Weight	2	3	6	7	3	7

Q.15 Explain the step deviation method of calculation arithmetic mean, taking an imaginary set of data. 4

SECTION – B (INDIAN ECONOMICS)

Q.16 When was India's first official census operation undertaken? 1

Q.17 India Divided is written by ---------- . 1

Q.18 Who discuses as first the concept of a poverty line? 1

Q.19 What are the two major sources of human capital in a country? 1

Q.20 Define a plan? 1

Q.21 Name types of economic system? 1

Q.22 Explain classification of industries according to industrial policy Resolution 1956. 3

Q.23 Is there any relationship between unemployment and poverty? Explain. 3

Q.24 What factors contribution to human capital formation? 3

Q.25 What was the role of small scale Industries in employment generation and steps taken by Govt. for the promotion it? 4

Q.26 What was the three dimensional attack on poverty adopted by the Government? 4

OR

What are main causes of poverty? 4

Q.27 Explain New economic policy 1991.

Q.28 Explain the basic features of Indian Economy on the eve of independence. 6

Q.29 What are the impact reforms on agriculture and industry? 6

Q.30 "Human capital formation is the outcome of investment in education, health, on the job training, migration and information" Write the Importance of human capital formation in context of this statement. 6

OR

State the role of NCERT, AICTE, ICMR and UGC in education.

ORAL & Project → **10**

**ALL THE BEST **

Roll. No. _____ **Code No.** 11/Mathematics/NLCS/32

Quarterly Examination 2016 – 17

Time: 3:00 Hrs. **M. M. 100**

General Instruction :-

(i) All Questions are compulsory.
(ii) The Questions are divided into 3 Sections A, B & C.
(iii) Section – A Question No. 1 to 6 carry **One Mark** each.
Section – B Question No. 7 to 19 carry **Four Marks** each.
Section – C Question No. 20 to 26 carry **Six Marks** each.

Section – A

Q.1 If ordered pairs $(3x+2y,7)=(74,4x-y)$ then find x & y.

Q.2 Evaluate $\tan 15°$.

Q.3 Write general solution of $\sec\theta = 2$.

Q.4 If $P(n): 1^3+2^3+3^3+4^3+.....+n^3=\frac{n^2(n+1)^2}{4}$. Verify that $P(n)$ is true for $n=2$.

Q.5 If $P(n): 10^{2n-1}+1$ is divisible by 11. Verify that $P(n)$ is true for $n=1$. Also write $P(k)$, Assuming it to be true.

Q.6 Write the multiplicative inverse of $z=1-i$.

Section – B

Q.7 If $\cup=\{1,2,3,4,5,6,7,8,9,10,11,12\}$. $A=\{1,3,5,7,9\}$ $B=\{8,9,10,11\}$. $C=\{1,2,3,4,10,11\}$.

Then compute :

(a) $(A\cup B)'$ (b) $A'\cap B'$ (c) $B-C$ (d) $C-B$

Q.8 Find the domain and range of $f(x)=\sqrt{16-x^2}$.

Q.9 If $t(c)=\frac{9c}{5}+32$ be a function that relates two variables t and c. Then find

$(a)\ t\ (0)$ $(b)\ t\ (28)$ $(c)\ t\ (-10)$ (d) The value of c when $t(c)=212$.

Q.10 Prove that $\cos 20°\cos 40°\cos 60°\cos 80°=\frac{1}{16}$. **OR** $\sin\frac{x}{2}\sin\frac{7x}{2}+\sin\frac{3x}{2}\sin\frac{11x}{2}=\sin 5x\sin 2x$.

Q.11 Prove that $\cot x\cot 2x-\cot 2x\cot 3x-\cot 3x\cot x=1$. **OR** $\frac{1+\sin x+\cos x}{1+\sin x-\cos x}=\cot\frac{x}{2}$.

Q.12 In ΔABC, using properties of triangles, prove that $a^2\sin(B-C)=(b^2-c^2)\sin A$.

Q.13 Using PMI prove that $1^2+2^2+3^2+.....+n^2=\frac{n(n+1)(2n+1)}{6}$ $n\in N$.

Q.14 Find the square root of $8+6i$.

Q.15 Convert $z=-3+i\sqrt{3}$ into polar form.

Q.16 If $x+iy=(u+iv)^{1/3}$ then show that $\frac{u}{x}+\frac{v}{y}=4(x^2-y^2)$.

OR

Find real θ such that $\frac{3+2i\sin\theta}{1-2i\sin\theta}$ is purely imaginary. Give solution for θ in general form.

Q.17 Solve for real x: $|3-4x|\geq 9$.

Q.18 If a,b,c are in AP; b,c,d are in GP and $\frac{1}{c},\frac{1}{d},\frac{1}{e}$ are in AP; prove that a,c,e are in GP.

Q.19 Evaluate $\sum_{K=1}^{K=11}\left(2+3^K\right)$. **OR** Find the sum S=0.5+0.55+0.555+0.5555…..up to n. up to n terms.

Section – C

Q.20 Show that $\frac{1\times 2^2+2\times 3^2+.....+n\times(n+1)^2}{1^2\times 2+2^2\times 3+.....+n^2\times(n\times 1)}=\frac{3n+5}{3n+1}$.

Q.21 If $\frac{a^{n+1}+b^{n+1}}{a^n+b^n}$ is the G.M. of a and b for some value of n, then find n.

OR

If S be the sum, P be the product and R be the sum of reciprocals of n terms of a GP. Prove that $P^2R^n=S^n$.

Q.22 A solution of 9% acid is to be diluted by adding 3% acid solution to it. The resulting mixture is to be more than 5% but less than 7% acid. If there is 460 litres of the 9% acid solution, how many litres of 3% solution will have to be added.

Q.23 Using PMI prove that $\frac{n^5}{5}+\frac{n^3}{3}+\frac{7n}{15}$ is a natural number.

OR

Using PMI prove that $P(n):\frac{1}{1.2.3}+\frac{1}{2.3.4}+.....+\frac{1}{n(n+1)(n+2)}=\frac{n(n+3)}{4(n+1)(n+2)}$.

Q.24 Prove that : $\frac{\cos 2x\cos 3x-\cos 2x\cos 7x+\cos x\cos 10x}{\sin 4x\sin 3x-\sin 2x\sin 5x+\sin 4x\sin 7x}=\cot 6x\cot 5x$.

Q.25 Find the range of following functions :

(a) $f(x)=\frac{|x-2|}{x-2}\quad x\in R-\{2\}$

(b) $f(x)=3\sin x+4\quad x\in R$

(c) $f(x)=2x-3\quad x>0$

Q.26 A survey of 500 television viewers produced the given information : 285 watch football, 195 watch hockey, 115 watch cricket, 45 watch football and cricket, 70 watch football and hockey, 50 watch cricket and hockey, 50 do not watch any of the three games. How many watch exactly one of the three games?

**ALL THE BEST **

Roll. No. **Code No.** 11/Chemistry/NLCS/34

Quarterly Examination 2016 – 17

Time: 3:00 Hrs. **M. M. 70**

General Instruction :-

Question No. 1 to 5 carry **One Mark** each. Question No. 6 to 10 carry **Two Marks** each.
Question No. 11 to 22 carry **Three Marks** each. Question No. 23 carry **Four Mark.**
Question No. 24 to 26 carry **Five Marks** each.

Q.1 Express in scientific notation : (i) 0.0048 (ii) 234000

Q.2 Write two properties of cathode rays.

Q.3 What do you mean by octet rule?

Q.4 What are the necessary conditions for any system to be aromatic?

Q.5 Draw the Cis and Trans structures of hex–2–ene.

Q.6 Calculate the mass percent of different elements present in Na_2CO_3.

Q.7 The threshold frequency V_0 for a metal is 7×10^{14} sec^{-1}. Calculate the K.E. of an electron emitted when radiation of frequency $V=1\times10^{15} sec^{-1}$ hits the metal.

Q.8 What is the difference between σ bond & π bond (any four)?

Q.9 Explain inductive effect with the help of example.

Q.10 Write IUPAC name : (i) $(CH_3)_3 C\ CH_2C(CH_3)_3$ (ii) $(CH_3)_2 C(C_2H_5)_2$

Q.11 A compound contain 4.07%,Hydrogen, 24.27% Carbon and 71.65% Chlorine. Its molar mass is 98.96g. What are its empirical and molecular formulas?

Q.12 A solution contains 25% water, 25% ethanol and 50% acetic acid by mass calculate the mole fraction of each component.

Q.13 If photon of wavelength 150 pm strikes on an atom and one of its inner bound electron is ejected out with a velocity of 15×10^7 m sec^{-1}. Calculate energy with which it is bound to the nucleus.

Q.14 Explain photoelectric effect.

Q.15 Explain the various rules followed during filling electron into the orbitals.

Q.16 Draw the resonance structures of $SO_3, NO_3^- \& CO_3^{-2}$.

Q.17 (i) Which out of $NH_3 \& NF_3$ has higher dipole moment & why?

(ii) Use MOT theory to explain why the Be_2 molecule does not exist?

Q.18 Explain Dumas methods to estimate the % of Nitrogen in organic compound.

Q.19 Define Isomerism. Describe briefly the various types of isomerism.

Q.20 (i) Why is benzene extraordinary stable though it contains three double bonds?

(ii) Despite their -I effect, halogens are o & p –directing in haloarenes. Explain.

Q.21 Why do alkenes prefer to undergo electrophilic addition reaction while arenes prefer electrophilic substitution reactions? Explain .

Q.22 How will you convert benzene into :

(i) P- nitrobromo benzene (ii) P-nitrotoluene (iii) m-nitrochlorobenzene

Q.23 Mr. Singh changed the amount of cheque and was caught by police. Chromatography is an technique extensively used to separate mixtures into their components to purify compounds and also to test the purity of compounds. If any cheque is written in a particular ink and somebody else alters it with another ink, it can be detected with the help of chromatography.

(i) What is the principle of chromatography?

(ii) How can forgery be detected with the help of chromatography?

(iii) What values are not possessed by Mr. Singh involved in forgery?

(iv) Can we separate components of orange ink by chromatography?

Q.24 (i) Explain the various quantum numbers which describe orbitals.

(ii) Write the increasing order of energy in which the orbitals are filled with electron.

OR

(i) Write short note on :

(a) Dual behavour of matter

(b) Heisenberg uncertainity principle.

(ii) Calculate the mass of photon with wavelength 3.6A°.

Q.25 Explain the various types of hybridyation with the help of example.

OR

Explain the various shapes of molecule with the help of VSEPR theory when no lone pair of electron is present on central atom.

Q.26 Write the reaction of arenes (Benzene) :

(i) Nitration (ii) Sulphonation (iii) Halogenation

(iv) Friedel –crafts alkylation (v) Friedel-craft acylation

OR

Write the following reaction to prepare alkanes

(i) (a) Wurtz reaction (b) Hydrogenation (c) decarboxylation

(ii) Explain Markovinkov rule & Kharas effect

**ALL THE BEST **

Roll. No. _____ **Code No.** 11/Physics/NLCS/34

Quarterly Examination 2016 – 17

Time: 3:00 Hrs. **M. M. 70**

General Instruction :-
Question No. 1 to 5 carry **One Mark** each. Question No. 6 to 10 carry **Two Marks** each.
Question No. 11 to 22 carry **Three Marks** each. Question No. 23 carry **Four Mark.**
Question No. 24 to 26 carry **Five Marks** each.

Q.1 Equation of state of some gas is given by. $\left(p+\frac{a}{v^2}\right)(v-b)=RT$. Where P=pressure, v=volume, T=absolute temperature, R is gas constant. Then what will be dimension of a and b?

Q.2 What is the numerical ratio of velocity to the speed of an object?

Q.3 Name the quantity which remains unchanged during the flight of an oblique projectile.

Q.4 Why are rubber tyres preferred to iron tyres?

Q.5 What is the angle between $\vec{A}\times\vec{B}$ and $\vec{B}\times\vec{A}$.

Q.6 Is the radius of gyration of a body a constant quantity? Explain.

Q.7 An astronaut accidentally gets thrown out of his small spaceship. What is the acceleration of the astronaut the instant after he is outside the spaceship? Assume nothing is nearby to exert gravitational forces.

Q.8 Two balls of different masses [one lighter and other heavier] are thrown vertically upward with same initial speed. Which one will rise to the greater height? & Why ?

Q.9 Define error, accuracy and precision with suitable example.

Q.10 State and prove Ohm's Law in vector form?

Q.11 In an experiment, the following observation were recorded L=2.890M, M=3.00kg., ℓ =0.087cm., r=0.021cm. taking g=9.81 m/s^2 . Use $y=\frac{MgL}{\pi r^2\ell}$. Find % error in y .

Q.12 Why Newton 2nd law of motion called real laws of motion? Explain.

Q.13 The displacement of a body is proportional to t^3, where t is the time elapsed. What is the nature of acceleration time graph.

Q.14 Prove that the rate of change of linear momentum of a rigid body is equal to torque acting on the body.

Q.15 "**LenZ Law is consequences for conservation of energy**" Explain with suitable example?

Q.16 On a two lane road, car A travelling with a speed of 36 $km/hr.$ Two cars B and C approach car A in opposite direction with a speed of 54 km/hr each. At a certain instant, when the distance AB is equal to AC, both being 1 km, B decide to overtake before C does. What minimum acceleration of car B required to avoid an accident?

Q.17 "**Friction is an necessary evil**" comment on this statement.

Q.18 State and prove parallel axis theorem.

Q.19 Find the value of 60 Joule on a system which has 100gm, 100cm and 1minute as fundamental units?

Q.20 When two vectors A and B are placed at any angle θ, then find out the magnitude and direction of resultant vector?

Q.21 Original length of a wire is $(158.7 \pm 0.6)cm.$ If it is stretched to $(159.2 \pm 0.2)cm,$ then calculate the elongation of wire with error limit & also find % error.

Q.22 Define wheat stone bridge? Write its working principle & prove with suitable diagram?

Q.23 You may have seen in far a motorcyclist driving in vertical loops inside a "death well" [A hollow spherical chamber with holes, so the spectators can watch from outside]. When he is at uppermost point with no support from below does not drop and perform his act.

(i) Why the motorcyclist does not drop and perform his act?

(ii) Give mathematical explanation.

(iii) What is the minimum speed required at the uppermost position to perform a vertical loop if the radius of the chamber is 25m.

Q.24 What do you mean by angular projection? If a projectile is projected with velocity u in a direction making an angle θ with the horizontal, then derive expression for

(i) equation of path of a projectile. (ii) time taken to reach maximum height

(iii) time of flight (iv) horizontal range and (v) maximum height attained.

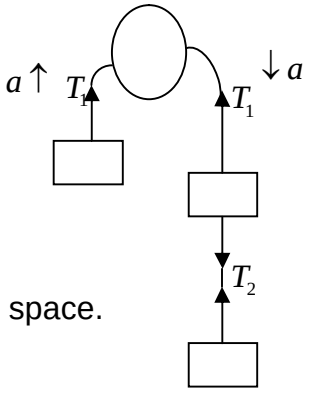
OR

(i) Use calculus method to derive all three equations of motion?

(ii) A cricketer can throw a ball to a maximum horizontal distance of 100m. How much high above the ground can the cricketer throw the same ball?

Q.25 What is the banking of a road. Find the expression for maximum velocity of a vehicle when it taking the turn without slipping.

OR



Find out the tension between masses m_2 and m_3.

Q.26 Find out expression for centre of mass of two particle system placed in space.

OR

Find out moment of inertia of a circular ring about – (i) An axis passes through centre of ring. (ii) Diameter of the ring. (iii) About an tangent in the plane of the ring. (iv) about an tangent in perpendicular to the plane of ring.

*ALL THE BEST **

Roll. No. **Code No.** 11/Biology/NLCS/15

Quarterly Examination 2016 – 17

Time: 3:00 Hrs. **M. M. 70**

General Instruction :-

Section A carries five questions of **One Mark** each.

Section B carries five questions of **Two Marks** each.

Section C carries twelve questions of **Three Marks** each.

Section D carries a value based question of **Four Marks**.

Section E consists of three questions of **Five Marks** each where in an internal choice has been provided.

Section A

Q.1 A maize grain is not a seed. Explain.
Q.2 What is the function of Phloem parenchyma?
Q.3 Why the heart wood's colour is dark?
Q.4 What do you meant by 9+2 pattern of organization?
Q.5 Give one example each of –
(i) an acidic amino acid (ii) a basic amino acid

Section B

Q.6 How does temperature affect an enzyme catalyzed reaction?
Q.7 On which organelle of the cell structure does intracellular digestion depend? What is the chemical content of those organelles?
Q.8 Where is the Bidder's canal located & how it is useful in frog?
Q.9 List out the significance of secondary growth.
Q.10 Why is coelenterala called Cnidaria?

Section C

Q.11 Metabolic reactions can be shown outside the body in cell free systems experientally. Why are cell required in living organisms?
Q.12 Explain the following terms in relation to plycomycetes –
(i) Mycelium (ii) Eucarpy & holocarpy (iii) Asexual reproduction
Q.13 (i) How green algae are used as food? Describe briefly.
(ii) What is the advantage of development of seed habits in seed plants?
Q.14 List some important features of spongia?
Q.15 Which structures form gynoecium? How is placenta related to gynoecium? What are its types?
Q.16 Comment on the statement 'living state is a non-equilibrium steady state to be able to perform work?
Q.17 Justify the statement –
(i) Mitochondria is the power house of the cell
(ii) Cell is the basic unit of life.
Q.18 Describe the structure of adipose tissue briefly with the help of diagram.
Q.19 (i) How will you classify vascular bundles in different types?
(ii) Describe the open & closed type of vascular bundles?

Q.20 Lenticles are loosely arranged are as in the periderm –

(i) How these are formed? (ii) What are their numbers?

(iii) How the lenticles help the plants?

Q.21 Differentiate between –

(i) Racemose & cymose inflorescence (3points)

(ii) Bract & Zracteole (3points)

Q.22 What is the special feature of archaelbacteria? How do these obtain food? How are they able to tolerate high temperature as well as acidity?

Section D

Q.23 Vikas, Student of class XI had interest in physical exercises & he also used to participate in body building competitions. One day, he visited as gym where the gym trainer suggested him to consume muscle building pills available in the market & also gave him a sample of such pills. Vikas showed that sample to his biology teacher who, after examination, found it to be rich in proteins & said him that he should not take them at his age & should consult a doctor before taking anything.

(i) What are the building blocks of proteins?

(ii) What is the importance of amino acids in an organism?

(iii) What is your opinion about muscle building pills available in the market?

(iv) What values are shown from teachers character?

Section E

Q.24 Write the function of – (i) Centromere (ii) Cell wall (iii) centrioles (iv) Smooth E R (v) Golgi apparatus

OR

Mention briefly about the circulatory system of Earthworm.

Q.25 List out the functions of connective tissue?

OR

Explain with suitable examples the different types of phyllotaxy?

Q.26 How are pisces different from tetrapoda? (Any 7 points)

OR

Define the following terms – (i) phylum (ii) Class (iii) Family (iv) order (v) genus

**ALL THE BEST **

Roll. No. **Code. No.** 11/Accountancy/NLCS/72

Quarterly Examination 2016 – 17

Time: 3:00 Hrs **M.M. 100**

Q.1 WRITE ACCOUNTING EQUATION

Q.2 What do you mean by ledger ? 1

Q.3 Write any two difference between Sales account and Sales book. 1

Q.4 Write any two advantage of Bank reconciliation statement. 2

Q.5 What is suspense account. 2

Q.6 Define following words 4

(i) Stock (ii) Capital (iii) Debtors (iv) Profit

Q.7 Indentify and write nature of following account 4

(i) Salary A/c (ii) Machine A/c (iii)Computer A/c (iv) Reliance company A/c

Q.8 Pass rectify entries for following errors 4

(i) sales book total overcast by ` 1200

(ii) Purchase return book total overcast by ` 400

(iii) Purchase book total under cast by ` 3800

(iv) Sales return book total under cast by ` 700

Q.9 Set up accounting Equation from following transaction 6

(i) Business started by cash stock ` 25000 & ` 5000 respectively

(ii) Goods purchased ` 16000 from Gopal (50% 0n cash)

(iii) Goods sold to Govind `20000 costing ` 12000 (Trade Discount 10%)

(iv) Goods withdrawn for personal use ` 2000

(v) 50% cash received from Govind

(vi) Cash paid to Gopal `12000

Q.10 Prepare bank reconciliation statement from following information 6

(i) Cash book shows credit balance ` 18300

(ii) A cheque ` 16400 deposited in to the bank was dishonored but not entered in cash book .

(iii) Insurance premium paid by bank ` 5300

(iv) A cheque of ` 36500 issued but not presented for payments.

(v) customer directly amount deposited in to the bank ` 12500

Q.11 Explain any three Accounting Concept 6

Q.12 Pass rectify entries for following error 6

(i) Goods returned to Hardik ` 3600 but entered in sales return book.

(ii) Salary paid to Rajnath ` 1200 but debited to Rajnath A/c ` 2000

(iii) Personal furniture ` 4000 introduced in business but not recorded in books.

(iv) Goods sold to Sachin ` 7600 but entered credit side of Sachin A/c ` 6700.

Q.13 Prepare double Cash Book from following transaction of September 2015 8

Date	Transactions	Amount (`)
1.	Cash in hand	33700
2.	Cash at bank	74000
3.	Goods purchased with cash	13100
6.	Goods sold to prashant and cheque received	15000
8.	Electricity bill paid by cheque	2800
11	Goods purchased and amount paid by cheque	16300
15.	Prashant's cheque deposited in to the bank	-----
20	Goods withdrawn for personal use	2000
23	Bank informed Prashant's cheque dishonored	------
24.	Interest received from Naresh	1500
28.	Rent paid by cheque	5000
30	Service charges charged by bank	1200
30	Dishonored cheque amount received fom prashant	-----

Q.14 Prepare Trial Balance from following balances 8

Name of Account	**Amount `**	**Name of Account**	**Amount `**
Building	87500	Goodwill	6700
Furniture	32500	Interest received	1200
Capital	120000	Debtors	35400
Purchase	90000	Investment	8200
Sales Return	15000	Creditors	23500
Sales	135000	Carriage inwards	1800
Salary	6200	Carriage outwards	6200
Advertisement	9700	Bills payable	43600
Purchase return	14700	Bills Receivable	20300
Drawing	17300	Cash	4800

Q.15 Prepare Purchase Book & Purchase return book from following transactions of Joshi book house 10

1st July 2016 Books purchased from Shyam book department

300 books of English ` 70 each

400 books of Physics ` 65 each

200 books of Economics ` 90 each

Trade discount- 20%

8th July 2016 Furniture Purchased from vishwakarma furniture house

2 Tables ` 1200 each

5 Chairs ` 500 each

Trade Discount- 5%

15th July 2016 Books returned to shyam book department
10 books of English & 30 books of Economics

21st july 2016 Books purchased Kishan books store
500 books of Accountancy ` 150 each.
400 Books of Business studies ` 120 each
400 books of Mathematics ` 130 each
Trade discount – 10%

26th July 2016 1 Table & 2 chairs returned to Vishwakarma furniture house

31st July 2016 Books returned to Kishan books store
40 books of Business studies & 30 books of Mathematics

Q.16 Prepare ledger of Q.no. 15 4

Q.17 Journalise the following transactions for July 2015 12

1. Business started with cash, stock, furniture ` 70000, `30000, `20000 respectively.
2. Goods purchased ` 50000 from Harsh ` 25000 (T.D. 10%)
5. Goods sold to Ashok with cash ` 16000. (VAT- 5%)
8. Bank A/c opened with ` 50000
10. Goods sold to Lokesh ` 20000 (T.D. 10%, 50% cash received)
15. Goods & cash withdrawn for personal use ` 3000, `2000 respectively.
17. Goods returned to Harsh ` 2500
19. Cheque received from Lokesh ` 8700 in final settlement & deposited in to the bank .
20. Furniture purchased ` 10000 & payment made by cheque. (40% for personal use)
24. Goods purchased ` 20000 & payment made by cheque (C.D. 5%)
27. Cash paid to Harsh ` 7000 & remaining paid by cheque.
31. Rent & Salary paid ` 1200 & ` 2800 respectively.

Q.18 Prepare following ledger account From above journal. 4

(i) Harsh A/c (ii) Furniture A/c

ORAL → **10**

** ALL THE BEST **