New Standard Public School, Raebareli
Half Yearly Examination-2015-16
Subject- Technical Drawing

Time: 3Hrs.   **Class-XE**   **M.M:- 70**

Note- **(i) The question paper is divided into three part. The questions of part A is compulsory. Questions from One part either B or C are to be attempted.**

(ii)   **In part a attempt only one questions either Natural Land scape painting or Design or Technical Drawing.**

(iii)   **Attempt only one part either 'B' Memory Drawing Or C Indian Art.**

(PART-A)   (45)
(Compulsory)
(Natural - Landscape - Painting)

(1) Prepare a landscape in a rectangle of 20 ×15cm showing a scene of Sun set including hills, huts, trees, animal bird and well etc. Use water colours or pastle colour in it.
Keep in view the following point:
  (i)   Correct drawing and perspective.
  (ii)   Composition
  (iii)   Selection of harmonious colours and their use.
  (iv)   General impression.

OR
(DESIGN)   (45)

Make an original design in one unit I a square of 16cm side which should be based on any Indian flower. Its buds, leaves. Use at least three colours.
Keep the following points in view in your design.
(i)   Originality.
(ii)   Composition. (7.5)
(iii) Colour Harmony.
(iv) General effect.

OR
(TECHNICAL DRAWING)   (45)

Note- (i) Attempt any three questions among the following five questions.
  (ii) In each answer given lines, construction lines and required lines must be clearly shown.

(a) Construct the indirect common tangent to two given circles with centres O and O' and radius equal to 2.5cm. Distance between their centres is 8cm.   (7+8)

(b) Construct a square whose diagonal is 8cm. construct inscribed two equal circles that touch each other and two sides of the given square.   (7+8)

(c) Construct a triangle equal in area to a given regular pentagon side 3.0cm.   (7+8)

(d) Prepare a geometrical design based on lines and area in a circle of diameter 10cm. This design is useful to the centre of a drawing room.   (7+8)

(e) Construct s simple scale of R.F = $\frac{1}{40}$ to read metres and desimetres. Show a length representing 3 metres and 6

(PART-B)   (25)
(MEMORY DRAWING)

Q.1- This question consists of two section. Do both the sections.

(a) Make a drawing from any one of the following in your drawing sheet in pencil showing light shade and shadow. The measurement of drawing should be about 15cm.   (12.5)
(i) Guava with leaves   (ii) Mango with leaves
(iii) Fish   (iv) Pumpkin

(b) Make a drawing from any one of the following in pencil on your drawing sheet. Drawing should be about 15cm.   (12.5)
(i) Cup Plate   (ii) Match Box   (iii) Umbrella   (iv) Bucket

(PART-C)
(INDIAN PAINTING)   (25)

Q. 2-(a) Describe art of Ajanta cave in short.   (15)

OR

Write about the main centres of Prepestoric Indian Painting.

(b) There are four alternatives of each questions: Choose the correct answer and write on your drawing sheet.

(i) Where is the State Lalit Kala Academy situated in Uttar Pradesh?   (1)
(a) Lucknow   (b) Kanpur   (c) Allahabad   (d) Varanasi

(ii) The group of primary colours is: (1)
(a) Red, Yellow, Blue   (b) Yellow, Red, Blue
(c) Orange, Green, Violet   (d) Black, Grey, White

(iii) Which is hot colour?
(a) Blue   (b) Sky blue   (c) Red   (d) Green

(iv) Which i0s the oppisite colour of black?   (1)
(a) Red   (b) White   (c) Yellow   (d) Green

(v) The sibject of per-historic painting is: (1)
(a) Devotion   (b) Domestic   (c) Hunting   (d) Courtier

(vi) Each angle of an equilateral triangle is: (1)
(a) 60^0 (b) 45^0 (c) 30^0 (d) 15^0

(vii) The measure of all the angles on one point is: (1)
(a) 180^0 (b) 90^0 (c) 60^0 (d) 360^0

(viii) Which pencil draws deep dark lines?   (1)
(a) H   (b) B6   (c) HB   (d) H2

(ix) By mixing Red and Blue which colour is obtained?   (1)
(a) Green   (b) Grey   (c) Orange   (d) Violet

(x) The book associated with art is: (1)
(a) Meghdoot   (b) Ramayana   (c) Geeta (d) Heritage of Ajanta

New Standard Public School, Raebareli
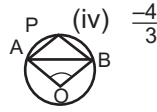## Half Yearly Examination-2015-16
Subject- Maths

Time: 3Hrs.   **Class- XE**   **M.M:-70**

Note:-All the questions are compulsory:-
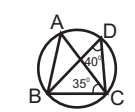
Q.1- Solve all the parts.   (Each1 mark)

(a) The simplest form of $\frac{x^2-1}{(x+1)^2}$ will be:

   (i) $\frac{x-1}{x+1}$ (ii) $\frac{x+1}{x-1}$ (iii) $\frac{(x+1)^2}{x^2-1}$ (iv) None of these

(b) The value of cos 1080⁰ is:

   (i) 0   (ii) –1   (iii) 1   (iv)

(c) The slope of the line 3x + 4y = 10 will be:

   (i) $\frac{3}{4}$ (ii) $\frac{-3}{4}$ (iii) $\frac{4}{3}$ (iv) $\frac{-4}{3}$

(d) In adjoing figure,   AOB= 90⁰, then value of
    APB will be:

   (I) 120⁰   (ii) 135⁰   (iii) 150⁰   (iv) 165⁰

(e)The lines 3x – 7y = 5 and 7x + 3y = 5 are mutually:

   (i) Parallel (ii) Perpendicular (iii) Coincident   (iv) None of these

(f) If surface area of a sphere is 4 cm², then diameter of the sphere is:

   (i) 1cm   (ii) 2cm   (iii) 3cm   (iv) 4cm

Q.2- Solve all the parts :-   (Each1mark)

(a) The H.C.F. and L.C.M. of two expressions A and B are H and L respectively. If A+B = H+L then, prove that: $A^3 + B^3 = H^3 + L^3$.

(b) Prove that: $\frac{\text{Sin A}}{1+\cos A} = \tan \frac{A}{2}$

(c) In the figure,   BCA = 35⁰ and   CDB = 40⁰, then find   ABC.

(d) The H.C.F. of x and y is H, then find the H.C.F. of x + y and x – y.

Q.3-Solve all the parts:-   (Each 2 marks)

(a) If the ratio of the roots of equation $lx^2 + nx + n = 0$ are p:q, then prove that: $\frac{P}{q} + \frac{q}{P} + \frac{n}{l} = 0$

(b) Calculate median for the following data:

Marks	25	26	27	32	31	30	29	28
Frequency	5	9	11	6	9	12	14	15

(c) Find the value of $\sin 7\frac{1}{2}^\circ \cdot \cos 37\frac{1}{2}^\circ$

(d) ABCD is a cyclic trapezium in which AB// DC. Prove that side AD = side BC.

Q.4- Salve all parts.   (Each 2marks)

(a) Rahim purchased an article costing ₹ 5,500 at 5% discount. After the discount he has to pay 5% sales tax. Find the amount paid by him for that article.

(b) Prove that equal chords of a circle is equidistant from the centre.

(c) Find the equation to the straight line which passes through the point (1,1) and perpendicular to the straight line 3x + 5y = 7.

(d) Cost of colouring a solid sphere at the rate of ₹ 2 per square metre is ₹ 308. find its radius.

Q.5- Solve all the parts-   (Each 4 marks)

(a) Solve : $\overline{2x+7} + \overline{3x-18} = \overline{7x+1}$.

(b) Cot A + Cot (60⁰ +A) – Cot (60⁰ –A) = 3 cot 3A.

(c) Two circles internally meet each other at the point P. Two secants PAB and PCD are drawn from the point P which intersect with the circle at points A, B, C and D respectively, then prove that: AC // BD.

(d) The base and altitude of a right triangle are 12cm and 5cm respectively. The triangle is revolved about its hypotenuse. Find the volume and total surface area of solid formed.

Q.6- Solve all the parts-   (Each 4 marks)

(a)A passenger takes 2 hours less for a journey of 300km, If its speed is increased by 5km/h from his usual speed. What is his usual speed.

(b) The mean of the given distribution is 50. Find the values of f₁ and f₂.

C. I	0 — 20	20 — 40	40 — 60	60 — 80	80 — 100
Frequency	17	f₁	32	f₂	19

Sum of frequencies is 120.

(c) Gross income of Ram in financial year 2014-15 is ₹ 5,25,000. He deposits ₹ 6,500 per months In provident fund and pays ₹ 15,000 annually as a premium of insurance policy. He purchased N.S.C. for ₹ 35,000 and ₹ 30,000 In Jawahar Lal Nehru memorial fund (eligible for 50% rebate in tax). Find the amount of income tax paid by him at the end of the year.

Rebate in tax: 100% of total savings (Maximum limit of ₹1,00,000)

Taxable income	Income Tax
(i) Up to ₹2,00,000	Nil
(ii) From ₹ 2,00,001 to ₹5,00,000	10% of the amount exceeding ₹ 2,00,000
(iii) From ₹ 5,00,001 to ₹ 10,00,000	₹ 30,000 + 20% of the amount exceeding ₹ 5,00.000

Surcharge:
(i) Education cess   2% of the tax payble
(ii) Secondary and higher   1% of the tax payble
   Education cess

(d) Prove that the product of lengths of perpendiculars drawn from points ($\overline{a^2-b^2}$, 0) to the straight line $\frac{x}{a} \cos + \frac{y}{b} \sin = 1$ is b².

Q.7- Solve all the parts-   (Each 6 marks)

(a) At a point on a level plane a tower subtends an angle   and a man A metres tall standing on its top subtends an angle . Prove that the height of the tower is $\frac{A \sin \cos(+)}{\sin}$ metre.

OR

(I) Prove that: $\tan^2 + \cot^2 + 2 = \sec^2 \cdot \csc^2$.

(ii) Solve: $\frac{\cos}{1-\sin} + \frac{\cos}{1+\sin} = 4$

(b) Construct a   ABC in which BC = 5.0cm. CA = 7cm and   B = 90⁰. Draw a circum circle of this triangle.

OR

Radii of two circles are 2.0cm and 3.5cm and distance between their centres is 7.0cm. Draw direct common tangents to the circles.

New Standard Public School, Raebareli
Half Yearly Examination-2015-16
Subject- Science

Time: 3Hrs.   Class-XE   M.M:-70

Note- There are three parts A, B & C in the paper salve each
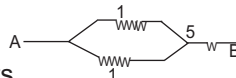question according to given instruction.

Section-A (Physics) 30

Q.1- Choose the correct answer of all the parts.   **(Each 1 mark)**

(a)   One object is placed before plane mirror at a distance of 10cm. The distance of image from the mirror will be:
(i) 5cm.   (ii) 10cm.   (iii) 20cm.   (iv) 0 cm.

(b)   The refrative index of glass is maximum:
(i) For green colour   (ii) For violvet colour
(iii) For red colour   (iv) For yellow colour

(c)   The power of a convex lens is 2 dioptre its focal length will be:
(i) 20c.cm.   (ii) 50c.m.   (iii) 40c.m.   (iv) 100 c.m.

(d)   The unit of electric charge is:
(i) Joule   (ii) Coulomb   (iii) Volt   (iv) Ampere

Q.2- Attempt all parts: **(Each 2 marks)**

(a)   Write the definition of magnetic flux. State its unit.

(b)   An electron is moving with the speed of 5×10^5 m/sec per pendicular to the magnetic field of 2×10^4 N/A-m. Calculate the magnetic force acting on the electron.

(c)   Find the equivalent resistance between points A and B in the following electric circuits.

Q.3- Attempt all parts-   **(Each 4 marks)**

(a)   What is linear magnification? Derive the formula m = – v/u for linear magnification of an imaged from a sperical mirror.

(b)   Angle of a prism is 60^0 and angle of minimum deviation is 38^0. Find the refrative index of the material of prism (Given: sin 49^0 = 0.75)

OR

Why the bulb with inert gases are more use full than vaccuum temperature- glow bulb)

Q.4-   Attempt the question: **(Each 7 marks)**

What is Biot- savart law? Write the formula of intensity of magnetic field produced due to a current carrying straight conductor of infinite length.

Or

What is meant by an electric generator? Describe the principle contruction and working of direct current generator using a diagram.

Section - B(Chemistry)

Note- All the questions are compulsory.

Q.1- Choose the correct option: **(Each 1 mark)**

(a) pH value of 10^{-6} M HCl solution is:
(i) 7   (ii) 6   (iii) –6   (iv) 0

(b) Antimony is:
(i) Metal   (ii) Non-metal   (iii) Metalloid   (iv) Inert gas

(c) Functional group in butanone is:
(i) – CO –   (ii) – CHO   (iii) – COOH   (iv) – OH

Q.2- Solve following questions:-   **(Each 2 marks)**

(a) Define complete salt with example.

(b) Write down the IUPAC name of the following compounds.
(i) H – C – H   (ii) CH_3CONH_2
                O

(c) A gas (A) gives following reactions.
(i) Its aqueous solution turns red litmus to blue.
(ii) This gas (A) gives explosive substance with the reaction of excess of Cl_2. Identify gas (A) and give chemical reaction.

Q.3- Write short notes on following: **(4)**
(i) Diagonal Relationship   (ii) Typical Element

OR

Explain the Roasting and Smelting process is of copper pyrite ore.

Q.4- Write short notes on the following: **(7)**
(i) Homologous Series   (ii) Saponification
(iii) Esterification   (iv) Schmidt reaction

OR

Describe laboratory method of preparation of ethylene gas with labelled diagram. Write down chemical equation of its reaction with the followings:
(i) HOCl   (ii) O_3
(iii) Baeyer's reagent   (iv)Sulphur monochloride

(Biology)

Note- All the questions are compulsory:

Q.1- Choose the correct option: **(Each 1 mark)**

(a) Father of genetics is:
(i) Galton   (ii) Mendel   (iii) Darwin   (iv) Lamarck

(b)   Which part of flower changes in fruit after fertilization:
(i) Stamen   (ii) Style   (iii) Ovule   (iv) Ovary

(c)   Water soluble vitamins are:
(i) A, D, E, K   (ii) A, B   (iii) A, B, C, D   (iv) B, C

(d)   Which part of human brain is highly developed:
(i) Cerebrum   (ii) Cerebellum
(iii) Diencephalon   (iv) Hypothalamus

Q.2- Solve all parts:
(a) Where are genes found?   (2)
(b) Who discovered DNA Finger printing?   (2)
(c) What is Biotechnology?   (2)

Q.3- Solve all parts:
(a) What will happen when RBCs remove from blood?   (4)
(b) Describe Mendel's second law with example.   (4)

OR

Draw a labelled diagram of structure of Flower.

Q.4- Solve all the parts: **(7)**

Why pituitary gland is known as Master gland? Where it is located in the body? Write name of two hormones and their functions which are secreted by this gland.

OR

Describe Darwin's theory of Natural selection with example.

New Standard Public School, Raebareli
Half Yearly Examination-2015-16
Subject- Social Science

Time: 3Hrs.   Class-XE   M.M:-70

Instruction- (1) Question paper is divided into 2 parts i.e. A and B
(2) All the question are Compulsory.

PART-A(HISTORY AND CIVICS)

Multiple choice question:-   (Each1 mark)

Q.1- In which country industrial revolution took place first?
   (i) India   (ii) England   (iii) France   (iv) America

Q.2- What was the ancient name of french parliament?
   (i) National Assembly   (ii) States general
   (iii) National convention   (iv) Directary

Q.3- The Book written by Hitler in Jail was:
   (i) My struggle   (ii) My Autobiography
   (iii) My Country   (iv) None of these

Q.4- In which session of congress the demand of Purna Swaraj was raised?
   (i) Kolkata   (ii) Mumbai   (iii) Lahore   (iv) Peshawar

Q.5- The retirement age of the judges of Supreme Court is decided as:
   (i) 62 years   (ii) 65 years   (iii) 70 years   (iv) 67 yaers

Q.6- The head office of SAARC is in:
   (i) Kathmandu   (ii) New Delhi   (iii) Colombo   (iv) Dhaka

(Very Short Answer Type Question) (Each 2 Marks)

Q.7- When was the treaty of Vrsailles organised? Which country was insulted most in this treaty?

Q.8- Which commission has been organised in place of planning commission? Who is its present Chairman.

Q.9- When and where was United Nations Organisation established?

(Short Answer type Question) (Each 3 Marks)

Q.10- Write the characteristics of Renaissance.
OR
Describe the main reasons of First Word War.

Q.11- Describe any two functions of Chief Minister.
OR
Describe the main functions of Security Council.

(Long Answer type Question) (Each 6 Marks)

Q.12- Throw light on the reasons of first struggle of independence of 1857.
OR
Describe the personality and social reforms performed by Raja Ram Mohan Roy.

Q.13-. Describe the Powers and functions of the speaker of Lok Sabha,
OR
What are qualifications for appointment of the Judge of High Court? Who appoints him?

Map-Work   (Each 1 Marks)

Q.14- Answer and locate the following features on the map of India with appropriatte symbols.
   (a) The place where Ram Krishana Mission was established.
   (b) The place where Prarthana Samaj was established.
   (c) The place where President's residence is situated.
   (d) The place where Lingraj temple is situated.
   (e) The place where Anand Bhawan is situated.

Part-B (Geography & Economics)

Multiple type Question: (Each 1 mark)

Q.15- The soil suitable for the cultivation of cotton:
   (i) Alluvial soil   (ii) Black soil   (iii) Laterite soil (iv) Red soil

Q.16- Heera Kund river valley project is constructed on the river:
   (i) Rihand river   (ii) Damodar river
   (iii) Mahanadi   (iv) Krishna nadi

Q.17- Kota atomic power centre is situated in:
   (i) Rajasthan   (ii) Tamilnadu (iii) Maharastra(iv)Uttar Pradesh

Q.18- Operation flood is related with:
   (i) Crop production   (ii) Fishries
   (iii) Milk production   (iv) Sugar production

Q.19- The planning commission in India was established in:
   (i) 1941 A.D   (ii) 1950 A.D.   (iii) 1951 A.D.   (iv) 1952 A.D.

Q.20- The payment provided to a capitalist for his capital is known as:
   (i) Interest   (ii) Profit   (iii) Rent   (iv) Payment

(Very Short Answer Type question) (Each 2 marks)

Q.21- Which state of India receive maximum rainfall?
Q.22- Write the name of two basic industries.
Q.23- Write two functions of the Gram Panchayat.

(Short Answer type Questions) (Each 3 marks)

Q.24- Throw light on the main measurements from the protection of earthquakes.
OR
Write the major problems of developing countries.

Q.25- What are the major problems of exchange of comodities?
OR
Write the main problems of small and the Cottage Industires.

(Long Answer Question) (Each 6 Marks)

Q.26- Describe in brief the Deccon Plateau.
OR
Throw light on the factors of increasing population in India.

Q27- What are the main sources of income of central government?
OR
What are the factors of the backwardness of agriculture in India? Describe in brief.

(Map Work) (Each 1 mark)

Q.28- Locate the following features on the map of India by the given symbols.
   (a) Nilgiri hills by
   (b) Bomdila pass by
   (c) Iron ore producing one state by
   (d) The region of alluvial soil by
   (e) Brahmaputra river by

New Standard Public School, Raebareli
Half Yearly Examination-2015-16
Subject- Computer

Time: 3Hrs.   **Class-XE**   **M.M:- 70**

Note- All the questions are compulsory.

Q.1- Choose the correct answer: **(Each 1 mark)**
   (a) In which form can data be transmitted through telephone lines
       (i) Digital   (ii) Analog   (iii) Hybrid   (iv) Micro
   (b) One Byte is equal to:
       (i) 2 Bit   (ii) 4 Bit   (iii) 6 Bit   (iv) 8 Bit
   (c) Decimal value of Binary Digit (11011) will be:
       (i) 11   (ii) 27   (iii) 36   (iv) 15
   (d) Hub is used in which type of topology?
       (i) Ring   (ii) Star   (iii) Bus   (iv) None of these
   (e) Who developed Linux:
       (i) Bill Gates   (ii) Linux Torvalds
       (iii) Ken Thompson   (iv) Dennis Ritchie

Q.2- Answer the following questions: **(Each 1 mark)**
   (a) What is Log in process?
   (b) What is X-server?
   (c) What is Kernel?
   (d) $(1101)_2$ + $(11)_{10}$ = $(?)_2$
   (e) Convert Decimal number 247 into Octal number system.

Q.3- Answer the following questions: **(Each2marks)**
   (a) Describe Sign2's complement with example.
   (b) What is Modulation? Explain any one of its type.
   (c) What is Search Engine
   (d) What is Bus Topology?
   (e) What is Domain name?

Q.4- Answer the following questions: **(Each2marks)**
   (a) What is string concatenation? Explain it with program?
   (b) What is Sequential File?
   (c) Describe Co-axial cable.
   (d) Describe any one De Morgan's theorem.
   (e) What is the use of getch () function?

Q.5- Answer the following questions: **(Each4marks)**
   (a) Write the procedure of AND or OR gate with their truth table.
   (b) Describe pow () function with program.
   (c) Describe the working of protocol.

Q.6- Answer the following questions: **(Each4marks)**
   (a) Describe Searching with program.
   (b) Describe VI Text editor.
   (c) Describe Insertion Sorting with program.

Q.7-   Write a program to print table of a number given by user.   (8)
                    OR
          Describe One Dimensional Array with program.

Q.8-   Describe any 8 characteristics of Linux.   (8)
                    OR
          Make a program to find the factorial value of a given number
          with the help of Recursion.