# West Bengal Council of Higher Secondary Education
## Vidyasagar Bhavan
9/2, Block DJ, Sector-II, Salt Lake, Kolkata – 91

No : DS(ACA)/NF_110814/2014　　　　　　　　　　　　**Date : 11.08.2014**

## NOTIFICATION

### Subject : Answers to queries regarding Question Pattern for Class XII

The Council would be publishing the Subject-wise Question Pattern book for Class XII within 20$^{th}$ of August , 2014. Three books will be published for Arts , Commerce and Science streams . Question Pattern for those subjects which won't be present in the books would be uploaded in our website ( www.wbchse.nic.in ) at the earliest.

Now , there are some confusion in the minds of the students and teachers regarding question pattern of Class XII for several subjects . So, we would clear out these confusions before the publication of the book. Given below are guidance about some of the subjects regarding which we have faced queries from the students and teachers:

1. **Maths Question Pattern**

**Theory – 80 marks**

**Project – 20 marks**

*The following are ( rough / illustrative ) guidelines of Mathematics Project*

Presentation : 5 + 5

Note Book : 3 + 3　　　　　　　　　　　　　　　　　Full Marks : 20

Viva-voce : 2 + 2

**Section–A**

1. Determination and comparison of areas bounded by a known curve (*e.g.* sin$x$, cos$x$, straight line, circle, parabola, ellipse) by definite integral and by dividing the total enclosed area into given number of small trapeziums (*i.e.* dividing the given interval into number of small subintervals, taking 3 values of $h$ )

OR

2. Detail discussion on Maxima and Minima of given function with special reference to the following cases :

i) Difference between local and global (or absolute) maxima and minima.

ii) Maxima and Minima at the points where the function is not differentiable (critical points, points of inflexion, stationary points,turning points).

iii) Function of the type $y = k/f(x), k \neq 0$

　　　　where $f( x ) = |x - a|, ax + b, ax^2 + bx + c, |x - a| + |x - b|$.

**Section–B**

Answer any *one* of the following :

3. Discussion on origin and formation of differential equation with reference to its application in one of the following cases :

i) Biological problems

ii) Physical and chemical problems

iii) Geometrical problems.

4. Discussion on different types of feasible and infeasible regions for both bounded and unbounded regions in Linear Programming Problems.

Investigations on real life problems that can be solved with the help of LPP.

5. History, development and application of matrix and matrix algebra.

6. Concept of Inverse Mapping (or function), condition of existence of inverse mapping, composition of a function with its inverse function,inverse trigonometric function,

interpretation of its principal values and their graphical representation, verification of properties of Inverse trigonometric functions.

**MARKS DIVISION**

PRESENTATION : 5 + 5 = 10

LAB. NOTE BOOK : 3 + 3 = 6

VIVA-VOCE : 2 + 2 = 4

Guidelines about Project :

1) The two projects must be done in two separate files.

2) The format of project would be as follows :

i) Introduction

ii) Description

iii) Conclusions / Findings

iv) Bibliography

( The hand written projects are only acceptable. No images from internet or other sources will be accepted )

Note : The topics of discussion / presentation in the project may not be close ended within the course syllabus but may be open ended in various directions which will depend on directives from the subject teacher ( project guide)

## 2.    **Sanskrit Question Pattern**

**Theory – 80 marks**

**Project – 20 marks** { Project guidelines given in the revised syllabus book to be published very shortly }

## 3.    **Anthropology Question Pattern**

**Theory – 80 marks**

**Project – 20 marks**

### PROJECT
### MODEL QUESTION PAPER
Full Marks : 20

i) Make a chart on Somatoscopic Observation on any trait — Hair, Nose, Skin colour considering 5 individuals.                                                      5 marks

ii) Make a chart on ABO Blood Group on the basis of presence of Antigen, Antibody and Agglutination.                                                              5 marks

iii) Do a Tablewise representation of BMI of five sub-adult boys / girls of a particular age group.                                                              5 marks

iv) Draw and describe any two Hunting / Fishing / Agricultural implements.   2.5+2.5 marks

4.    Students who would be appearing for H.S Examination in 2015 would have " Charandas Chor " by Habib Tanvir in English B syllabus. This text would be replaced by " The Proposal "  by A. Chekov from 2016 H.S Examination onwards i.e, for the students registered in 2014. This had been earlier notified vide Notification No. DS/ACA/NFENGBII/2014 dated 21/02/2014.

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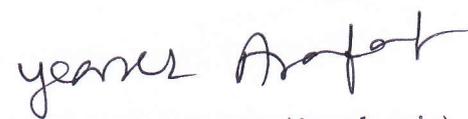
Deputy Secretary(Academic)

(WBCHSE)