

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- 2025

Btech-VII Sem- All branches

COURSE CODE (CREDITS): 24B1WHS732

MAX. MARKS: 35

COURSE NAME: KNOWLEDGE SYSTEMS IN ANCIENT INDIA- T3 MODULE

COURSE INSTRUCTORS: AKS, RKT

MAX. TIME: 2 Hours

Note: (a) All questions are compulsory.

(b) Use of calculators is strictly prohibited

(c) Solve all questions using Vedic Mathematical Principles only. Show steps clearly

Q.No	Question	CO	Marks
Q1	Solve the following as per base multiplication method or vertical and crosswise method i) 87×114 ii) 91×85 iii) 88×98 iv) 103×117 v) 105×97 vi) 521×234 vii) 889×399 viii) 642×375	3	$8 \times 1 = 8$
Q2	Use sandwich method or specific number rule to get the product of following. i) 123456×11 ii) 161937×12 iii) 2038405×9999999 iv) 44655593×999 v) 65345982×12 vi) 459873×11 vii) 2345×99999 viii) 643987×12 ix) 777777×99 x) 346758×9999999	3	$10 \times 0.5 = 5$
Q3	Solve the following using vedic mathematical means. i) $(135)^2$ ii) $(205)^2$ iii) $(113)^2$ iv) $(1017)^2$ v) $(83)^2$ vi) $(25)^3$ vii) $(33)^3$ viii) $(79)^3$ ix) $(24)^3$ x) $(19)^3$	4	$10 \times 0.5 = 5$
Q4	Find the square of the following using Duplex method i) 349, ii) 687, iii) 978, iv) 858, v) 999	4	5
Q5	Find the cube of following using base method i) 1004, ii) 1009, iii) 100007, iv) 987, v) 9994	5	5
Q6	Solve the following algebraic equations using vertical and crosswise method only i) $(7x+3y)(2x-7y)$ ii) $(9x-y)(5x-9y)$ iii) $(2x+x+3)(3x^2+5)$ iv) $(4x^2+3x^2+2x+3)(9x^3+2x+7)$ v) $(x^4+5)(x^3+x^2)$	5	5
Q7	Check the divisibility in following scenario using sum of digits approach. Show steps. i) 99876 by 9 ii) 43127 by 11 iii) 12975 by 15 iv) 45786 by 24	5	$4 \times 0.5 = 2$