**ĐÁP ÁN**

**I.Trắc nghiệm ( 7 điểm ) Mỗi câu đúng 0,25 điểm**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ĐỀ CHẴN   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | *002* | *008* | *004* | *006* | | 1 | B | D | C | B | | 2 | C | A | D | B | | 3 | C | D | A | C | | 4 | B | B | C | C | | 5 | D | B | B | D | | 6 | A | D | D | B | | 7 | B | D | C | D | | 8 | A | C | A | D | | 9 | C | B | C | A | | 10 | C | D | C | A | | 11 | D | A | B | D | | 12 | D | C | B | D | | 13 | B | C | D | C | | 14 | B | A | C | B | | 15 | D | A | A | D | | 16 | D | B | B | A | | 17 | A | C | A | D | | 18 | A | B | D | A | | 19 | C | B | A | C | | 20 | C | D | D | C | | 21 | A | D | D | C | | 22 | A | C | A | A | | 23 | C | B | B | B | | 24 | B | C | D | B | | 25 | A | D | B | C | | 26 | B | A | A | A | | 27 | D | C | C | A | | 28 | D | A | B | A | | ĐỀ LẺ   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | *001* | *005* | *003* | *007* | | 1 | C | B | D | D | | 2 | B | A | D | A | | 3 | C | A | B | D | | 4 | C | B | A | D | | 5 | B | B | D | A | | 6 | D | A | C | C | | 7 | D | C | D | A | | 8 | B | C | C | B | | 9 | C | A | C | B | | 10 | A | D | B | C | | 11 | C | B | B | A | | 12 | A | A | D | A | | 13 | B | D | A | B | | 14 | B | D | D | C | | 15 | D | B | A | A | | 16 | C | B | C | C | | 17 | A | C | D | A | | 18 | B | A | A | B | | 19 | C | D | B | D | | 20 | A | A | A | D | | 21 | D | C | B | B | | 22 | A | D | C | C | | 23 | B | D | B | D | | 24 | A | B | C | D | | 25 | A | C | C | B | | 26 | D | D | B | C | | 27 | B | C | A | B | | 28 | D | C | A | C | |

**II.Tự luận**

**Đề 001, 003,005,007**

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| --- | --- | --- | --- | --- |
| Bài | ý | Nội dung | Điểm | Ghi chú |
| 1 | a | A = 5 cm  T = = 0,2 s | 0,5  0,5 | Viết đúng CT cho 0,25 đ |
| b | Lập tỉ số:  =>  Quãng đường đi được trong 2T là s1 = 2.4A=8A  Quãng đường đi được trong thời gian  dựa vào sơ đồ dao động -> s2 = A vậy  s = 66,6cm  Tốc độ v = = 148 cm/s | 0,25  0,25 |  |
| 2 |  | Tính được =0,4 m | 0,5 | Viết đúng CT cho 0,25 đ |
|  | Tính được v =f = 40 m/s | 0,5 |  |
| 3 |  | Xác định được k = 3  Tính được ==1,5 cm | 0,25 |  |
|  | Tính được v =f = 15 cm/s | 0,25 |  |

**Đề 002, 004, 006, 008**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Bài | ý | Nội dung | Điểm |  |
| 1 | a | Biên độ A = 4 cm  Tần số: =1HZ | 0,5  0,5 | Viết đúng CT cho 0,25 đ |
| b | Lập tỉ số:  Quãng đường đi được trong 5T là s1 = 5.4A=20A  Quãng đường đi được trong thời gian  dựa vào sơ đồ dao động -> s2 = A vậy s = 21A=84cm  Tốc độ v = = 84/5,25 = 16 cm/s | 0,25  0,25 |  |
| 2 |  | Tính được m | 0,5 | Viết đúng CT cho 0,25 đ |
|  | Tính được v =f = 100 m/s | 0,5 |  |
| 3 |  | Xác định được k = 4  Tính được == 2 cm | 0,25 |  |
|  | Tính được v =f = 240 cm/s | 0,25 |  |